DEPARTMENT OF CITY PLANNING 100 LARKIN STREET · SAN FRANCISCO, CALIFORNIA 94102

DRAFT

ENVIRONMENTAL IMPACT REPORT

SAN FRANCISCO EXECUTIVE PARK

for

THE YERBY CORPORATION

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I. SUMMARY

The San Francisco Executive Park is an office park/hotel/restaurant complex proposed for construction on a 71-acre site in southern San Francisco between Candlestick Park and the James Lick Freeway (U.S. 101) on the south slope of Bayview Hill. The development would include 853,000 square feet of office space, 140,000 square feet of convention/restaurant space and shops, 118,000 square feet of hotel, and parking for nearly 3,900 vehicles. The project buildings would be sited on terraces at three levels and would be constructed in four phases:

1. 138,000 square feet of office space and 14,000 square feet of restaurant area contained in three 3-story buildings, parking for 568 cars. Completion date 1977.

2. 96,000 square feet of office space in two 3-story buildings and 74,900 square feet of office space in two 2-story buildings on a terrace 50 feet lower than the 3-story buildings; parking for 605 cars. Completion date 1979.

3. A 275-room hotel with 110,000 square feet of space and a restaurant-convention/meeting complex of 63,900 square feet; parking for 505 cars. Completion date 1979.

4. Two 15-story towers with 507,000 square feet of office space placed over three floors of underground parking, and 47,000 square feet of office space and 61,400 square feet of shops in four 2-story buildings forming edges of a central courtyard. The parking garage would have spaces for 2,215 vehicles. Completion date 1981.

For the proposed project to be implemented, a zoning change would have to be made and the 40-foot height limit would have to be reclassified to allow construction of the 15-story (approximately 200 feet in height) high-rise towers.

Implementation of the San Francisco Executive Park proposal would increase the volume of traffic on the freeway, access ramps, and neighborhood streets and raise levels of noise and air pollution; increase the demand for water, electricity, and natural gas; extend the need for sewage-treatment, stormwater and solid waste disposal facilities; and block views of Bayview Hill with two 15-story high-rise towers.

Nearly 4,900 jobs would be created by the project, half of which would probably be filled by commuters to the City. The City and County of San Francisco would receive an increase of $1,750,000 in annual property, payroll, hotel room, and sales taxes. Over $190,000 is estimated for the annual cost of municipal services needed to meet the public street maintenance, and sanitary sewage treatment demands of the proposed development.

The outdoor comfort of the project users would be affected by the wind as it flows around the high-rise buildings, although the major impacts would be mitigated by siting of the buildings, canopies at the base of the towers to deflect the wind at low levels, the shape of the towers and landscaping. The structures on the project would have to have special noise insulation provisions to mitigate the traffic generated sound from the adjacent freeway on the west side of the site.

The structures and parking lots would be landscaped and some 1,000 native trees would be planted on the 30 acres of undeveloped space remaining on the 71-acre site.

During the five year construction period there would be disruption of the area by construction generated noise, dust and traffic. Mitigation measures would be implemented to minimize the disruptions and hazards of construction.

Alternatives discussed in this document include the no project alternative, use of the site for open space and recreation activities, residential use, light industrial use, a reduction in density with the same use as the proposed project, and the proposed project density without the high-rise towers.

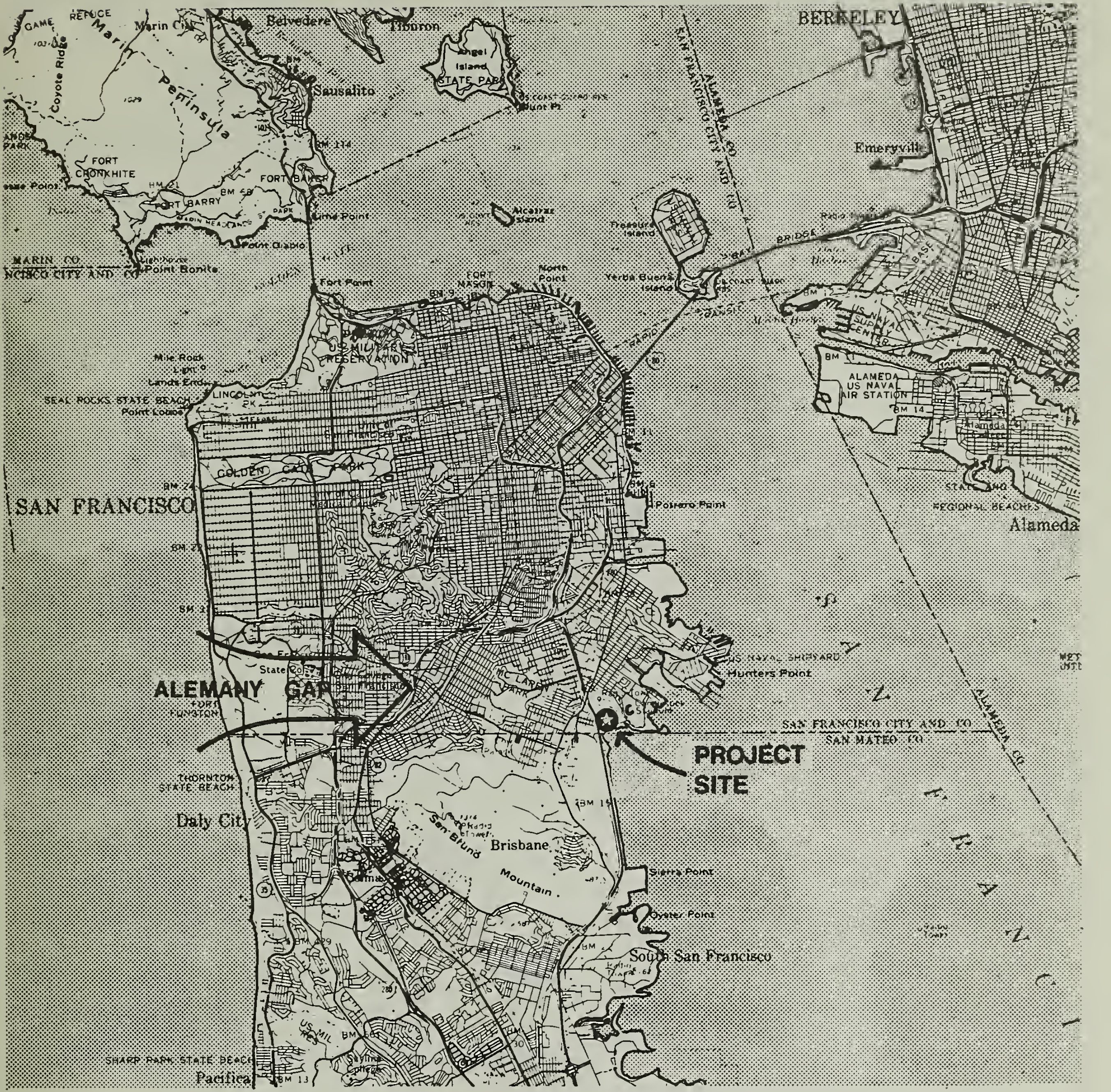


FIGURE 1. REGIONAL LOCATION MAP

NORTH

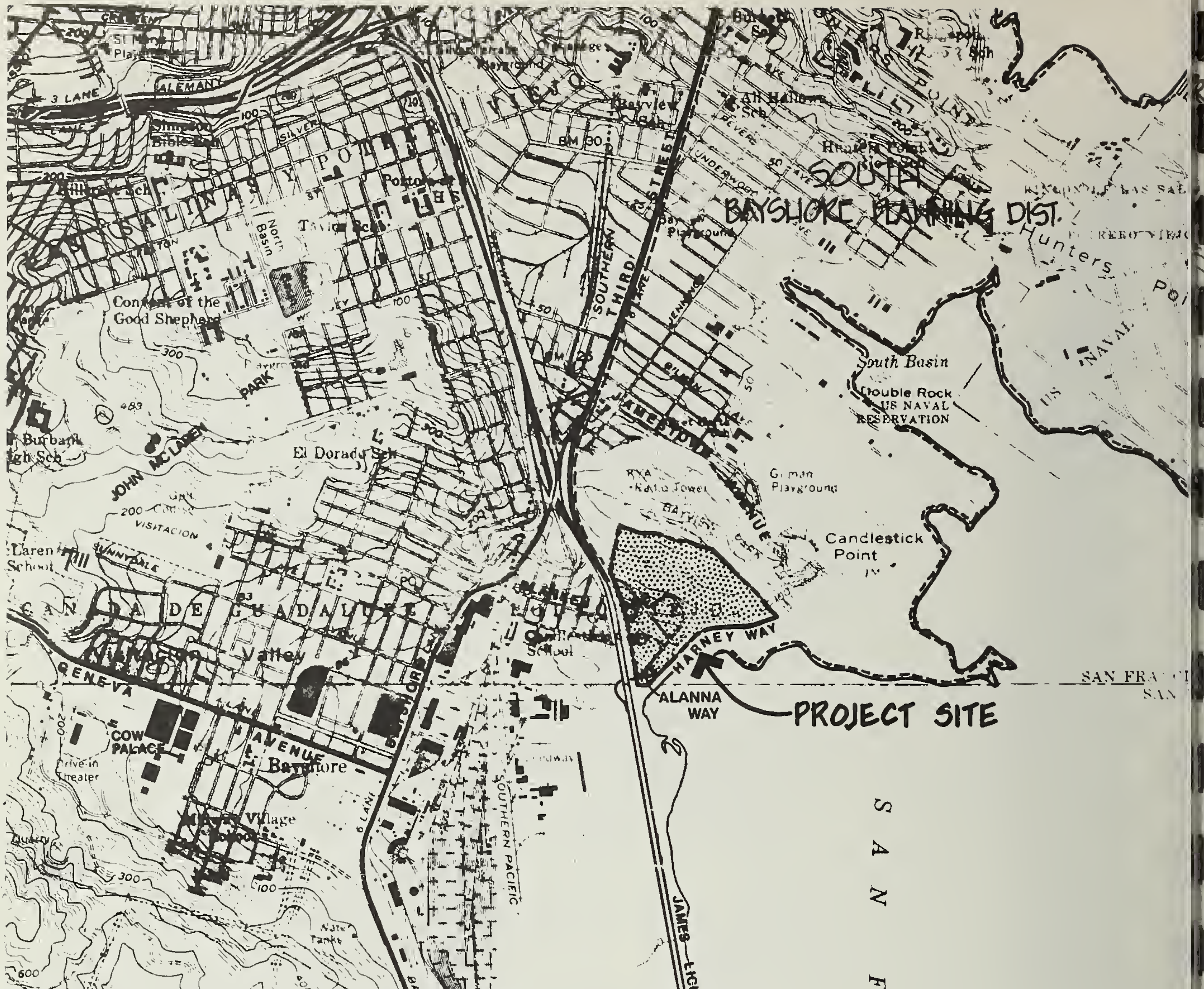


FIGURE 2. SITE LOCATION MAP

II. PROJECT DESCRIPTION

A. LOCATION

The proposed San Francisco Executive Park is located in the southeast corner of the City of San Francisco (Figure 1). Situated on the southerly boundary of the City and County, the 71-acre site lies east of Highway 101 and immediately west of Candlestick Park, in the South Bayshore Planning District (Figure 2, page 4 and 11, page 32). Highway 101 furnishes direct access from downtown San Francisco (six miles) and the San Francisco International Airport (six miles). The Cow Palace, a convention, sports, and special activities center, is 1.7 miles to the west and Candlestick Park stadium is near the east side of the project site.

The property is Lot 69, Assessor's Block 4991. It is bounded on the west by the James Lick Freeway (U.S. 101); on the south by Harney and Alanna Ways; on the east by City property next to Jamestown Avenue; and on the north by Bayview Park, the uppermost portion of Bayview Hill. Blanken Avenue bisects the site and connects via a tunnel under Highway 101 with the Little Hollywood area (Figures 2 and 11) of San Francisco.

B. PROJECT OBJECTIVES

The objectives of the proposed project are:

1. To provide a suburban office park in San Francisco with restaurant, hotel, and convention/meeting facilities in a setting of park areas with trees, lawns, and pools.

2. To attract additional businesses to San Francisco and retain those that might be considering leaving the City for a more convenient suburban location.

3. To obtain a return on the applicant's investment. The project site is owned by Macor, Inc. and Sunset Properties, Inc., and the project sponsor and developer is the Yerby Corporation, all of San Francisco. The architect is Design and Engineering Systems, Inc., of Redwood City. Other technical specialists involved with the project are listed in Section XI.

C. GENERAL CHARACTERISTICS OF THE PROJECT

The proposed project would include 853,000 square feet of office space, 140,000 square feet of convention/restaurant space and shops, 118,000 square feet of hotel, and parking for nearly 3,900 vehicles (Figure 3). The site lies on the south slope of Bayview Hill (Figure 3A) and consists of a series of terraces with steeply-sloped banks between. The project buildings would be sited on these terraces at three different levels (Figure 4) and would be constructed in four phases:

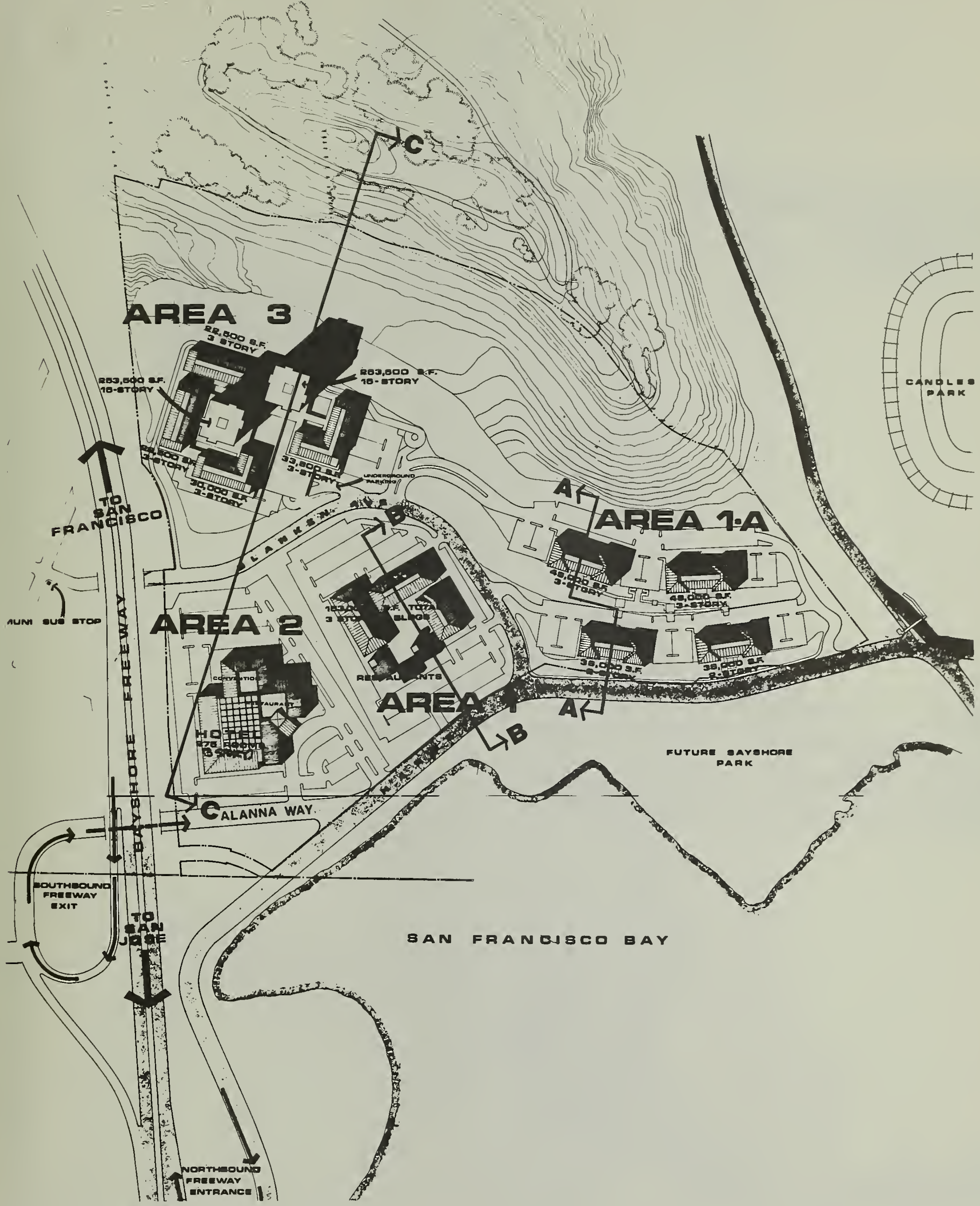
- --The first phase (Area 1) consists of 138,000 square feet of office space and 14,000 square feet of restaurant area contained in three 3-story buildings placed around a central courtyard with parking for 570 cars. The at-grade parking lots serving the area would have access from the extension of Blanken Avenue and Harney Way, and would be screened by landscaping.

- --The second phase (Area 1A) would include 96,000 square feet of office space in two 3-story buildings on an elevation approximately the same as Area 3, and 74,200 square feet of office space in two 2-story buildings about 50 feet lower than the upper terrace. The four buildings would contain a total of 171,000 square feet, and parking spaces for 605 cars would be included: 339 on the upper terrace and 266 on the lower. Both parking lots would be at-grade with perimeter landscaping; Blanken Avenue and Harney Way would furnish access.

- --Phase three (Area 2) would include a 275-room hotel with 110,000 square feet of space, a restaurant-convention/meeting complex of 63,900 square feet and parking for 505 cars. The area would have access from Alanna and Harney Ways for Area 1.

- --Phase four (Area 3) would add 507,000 square feet of office space in two 15-story towers placed over three floors of underground parking, and 47,000 square feet of office space and 61,400 square feet of shops in four 2-story buildings forming the edges of a central courtyard. The parking garage would have spaces for 2,215 vehicles and would be reached from Blanken Avenue.

The 2- and 3-story office buildings would contrast with the office towers by emphasizing a suburban character and scale,



SEE FIGURE 4 FOR SECTIONS

FIGURE 3. PROJECT SITE PLAN

NORTH

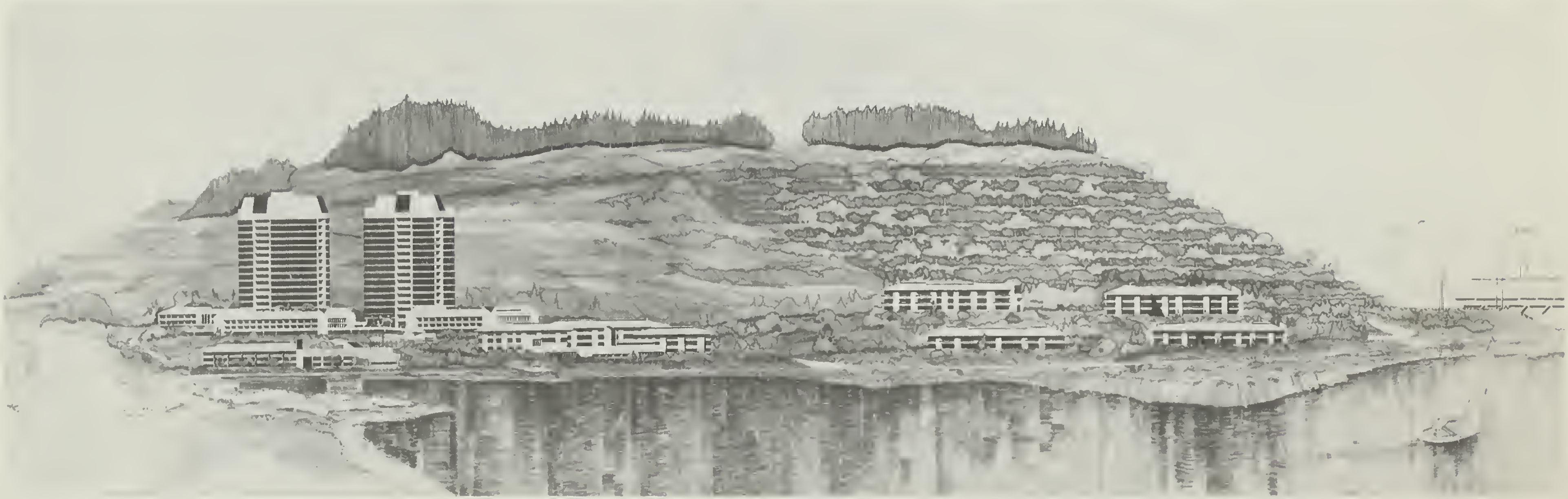
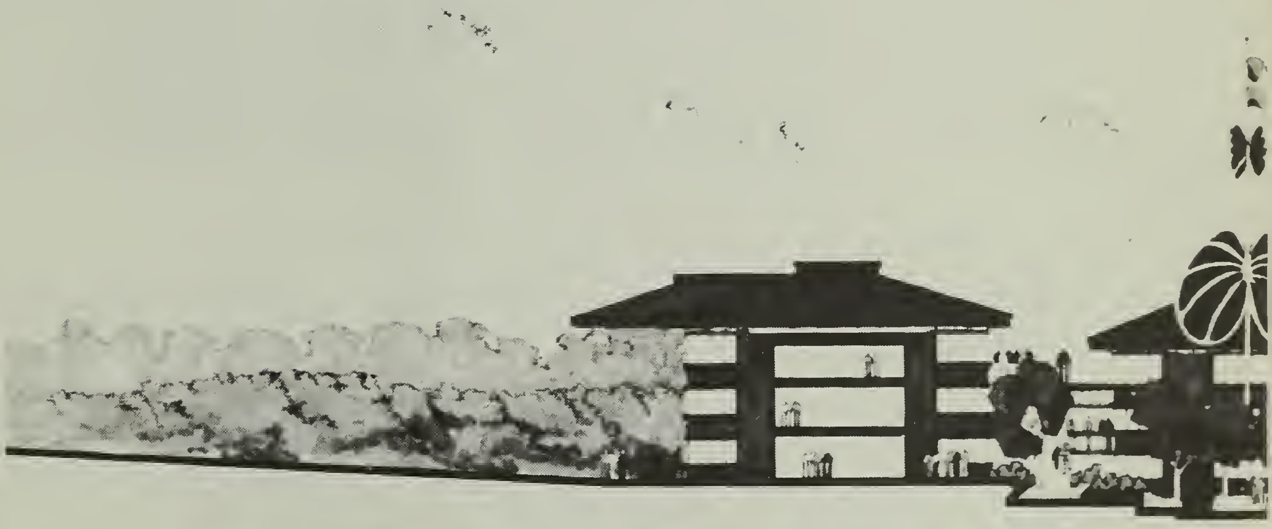
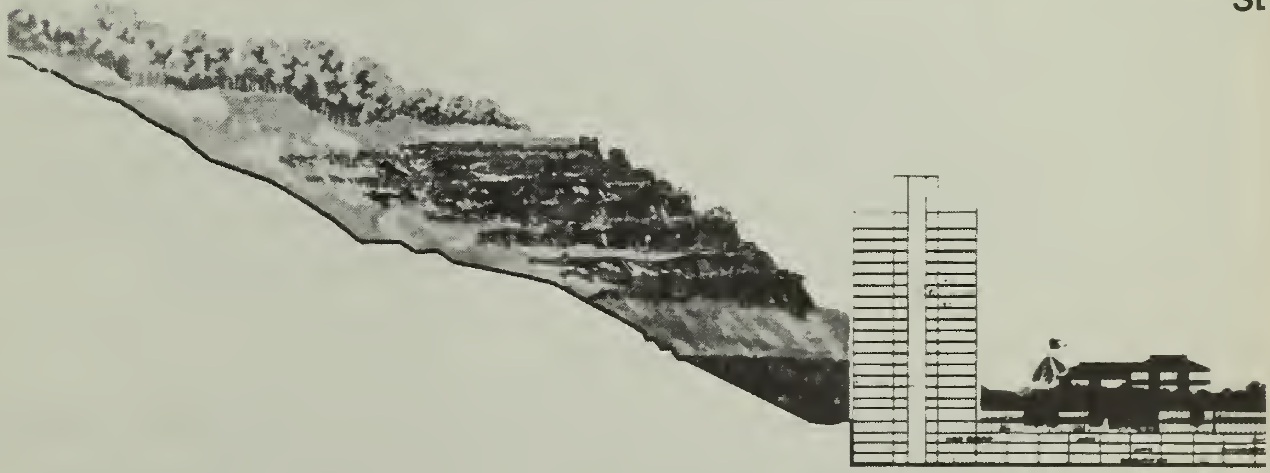


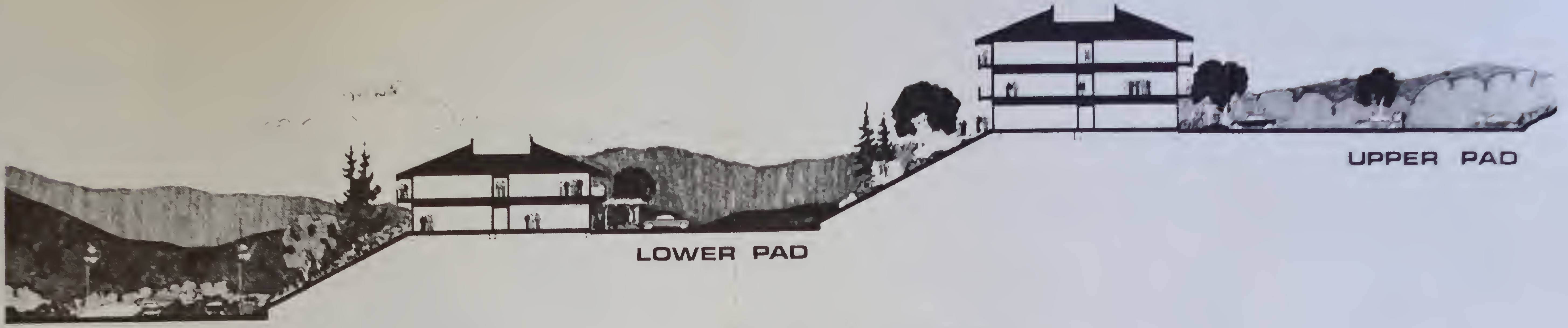
FIGURE 3A. SOUTH ELEVATION



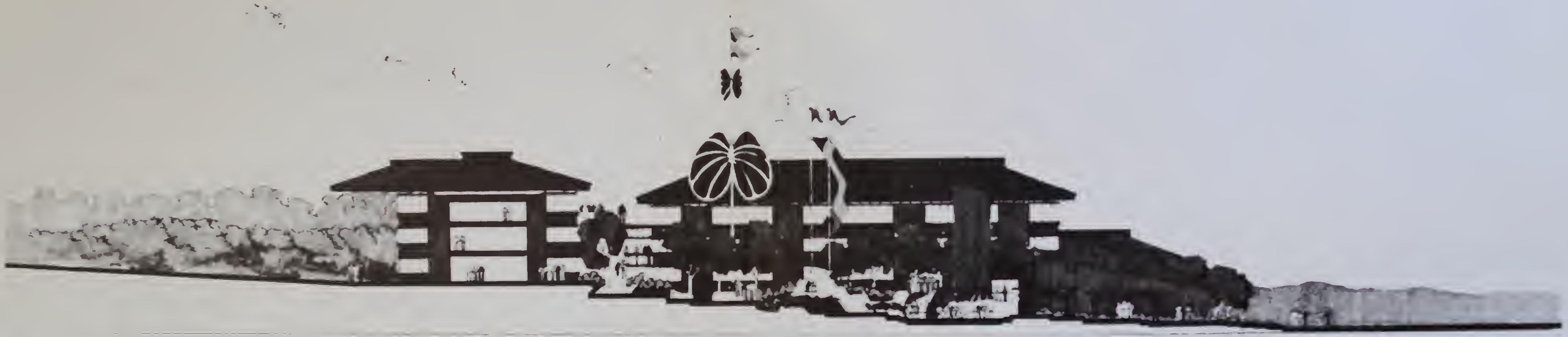


SEE FIGURE 3 FOR SECTION LOCATIONS

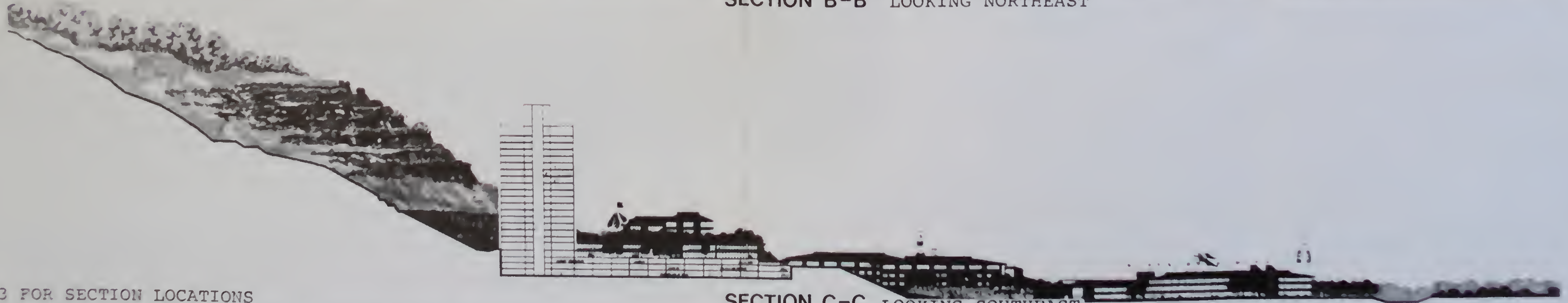
FIGURE 4. SECTIONS THROUGH PROJECT



SECTION A-A LOOKING WEST



SECTION B-B LOOKING NORTHEAST



SECTION C-C LOOKING SOUTHEAST

SEE FIGURE 3 FOR SECTION LOCATIONS

FIGURE 4. SECTIONS THROUGH PROJECT

rezoned C-2 (Community Business District) and a reclassification of height limits from 40 feet to 200 feet made to enable construction of the 15-story office towers. The Environmental Impact Report would have to be certified by the Planning Commission before consideration of the zoning changes. Before any specific use permits (e.g., water and electrical connections, realignment of Blanken Avenue) could be issued, the Planning Commission would have to approve the zoning changes.

Upon receipt of the rezoning, height reclassification, and other required permits, project construction would begin under the following schedule:

Area 1: begin 1976, complete 1977
Area 1A: begin 1978, complete 1979
Area 2: begin 1978, complete 1979
Area 3: begin 1979, complete 1981

utilizing dark-stained wood siding and wood trim. Windows would have solar bronze glass set in bronze anodized aluminum.

The structures and parking lots would be landscaped, and some 1,000 native trees and shrubs would be planted on the 30 acres of undeveloped space remaining on the 71-acre site. Most of these trees and shrubs would be planted on the steep slopes between the buildings and the Bayview Park. Although the landscaping would be designed to complement the appearance of Bayview Park, no direct pedestrian access is planned from the site to the park. Maintenance of planted areas and of the project as a whole would be insured under covenants made at the onset of development that would impose architectural control and maintenance requirements on all users of the project. Provision would also be made for security surveillance and patrols for the common benefit of project owners and users.

D. COST

Development in terms of construction by phases would cost in 1975 dollars:

Phase I	$ 6,300,000
Phase II	6,800,000
Phase III	8,700,000
Phase IV	26,600,000
Total	$48,400,000

Office space is designed to rent about $0.73 per square foot. The hotel is designed to accommodate overnight tourists and business persons and convention crowds using the Cow Palace or the project's convention/meeting facilities. Room rates would be in the range of $25-$35 per night per person.

E. SCHEDULING OF PROJECT

Part of the project area is zoned R-1 (One Family Residential District) and the rest M-1 (Light Industrial District). For the project to be implemented, the site would have to be rezoned C-2 (Community Business District) and a reclassification of height limits from 40 feet to 200 feet made to enable construction of the 15-story office towers. The Environmental Impact Report would have to be certified by the Planning Commission before consideration of the zoning changes. Before any specific use permits (e.g., water and electrical connections, realignment of Blanken Avenue) could be issued, the Planning Commission would have to approve the zoning changes.

Upon receipt of the rezoning, height reclassification, and other required permits, project construction would begin under the following schedule:

Area 1: begin 1976, complete 1977
Area 1A: begin 1978, complete 1979
Area 2: begin 1978, complete 1979
Area 3: begin 1979, complete 1981

III. ENVIRONMENTAL SETTING

1. Topography

The topography of the proposed project site is characterized by a series of terraces or benches with steep slopes separating the levels on the upper portions of the site and more gentle transitional slopes on the southern portion (Figure 5). Most of the site has been terraced and few signs of the natural topography remain.[1] The property rises at its northerly boundary line to elevations of 250 to 390 feet. Candlestick Hill crests at an elevation of 450 feet.

The southwest corner of the site contains a small area of fill (Figure 6, page 15) that is relatively flat. The areas on the southerly portions of the site are broadly terraced compared to the narrower benches higher on the hillside (Figures 7, page 16; 8, page 17; and 9, page 18). The southern property line ranges in elevation from 10 to 20 feet above sea level.

2. Geology, Soils, and Seismicity

Information contained in a preliminary geologic engineering study prepared by Dames and Moore[2] indicated that rocks exposed at the project site are part of the Franciscan[3] group, consisting of predominantly sedimentary rocks roughly 100 to 150 million years old.

---

[1] Dames and Moore, Preliminary geological engineering study, slope stability and general subsurface conditions, proposed development, Candlestick Cove, San Francisco, California, 1969.

[2] Ibid.

[3] Franciscan rocks are typical of the northern California Coast Ranges and underlie the hills of San Francisco. They consist of a mixture of dark-colored muddy sediments, red, green and brown cherts and lava flows of black basalt, all material laid down on the floor of the Pacific Ocean about 100 million years ago.

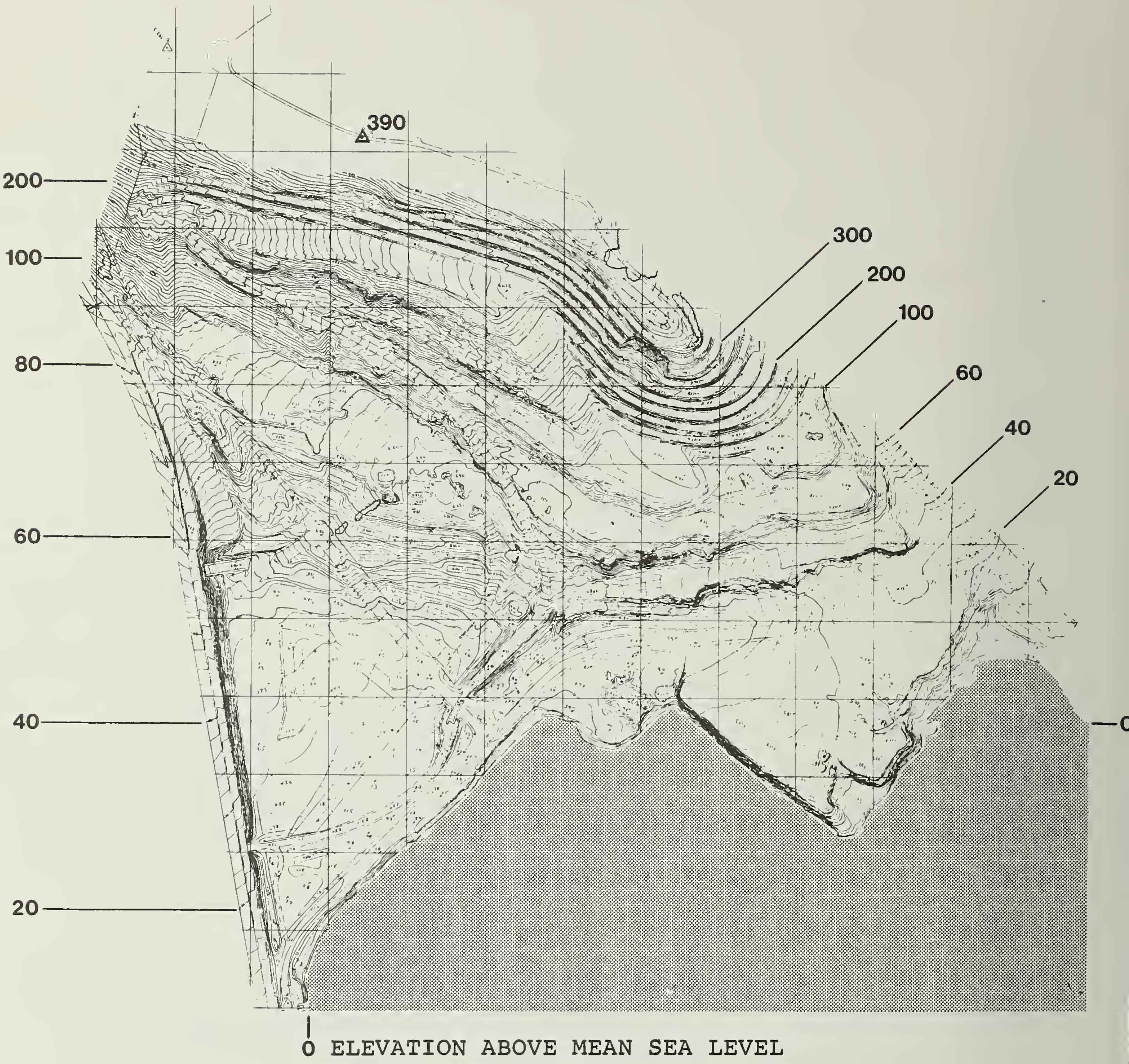


FIGURE 5. EXISTING TOPOGRAPHY

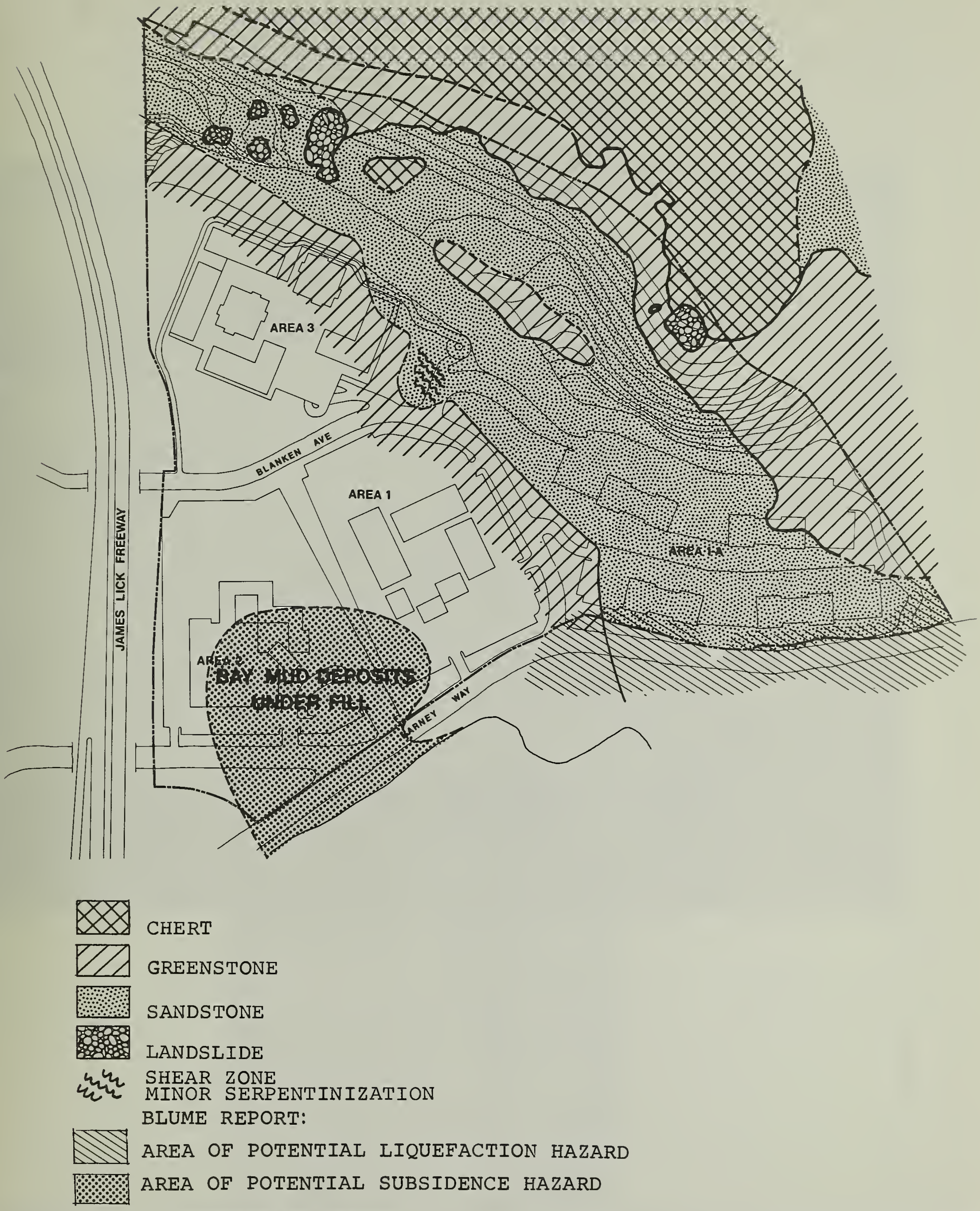


FIGURE 6. EXISTING GEOLOGY

NORTH

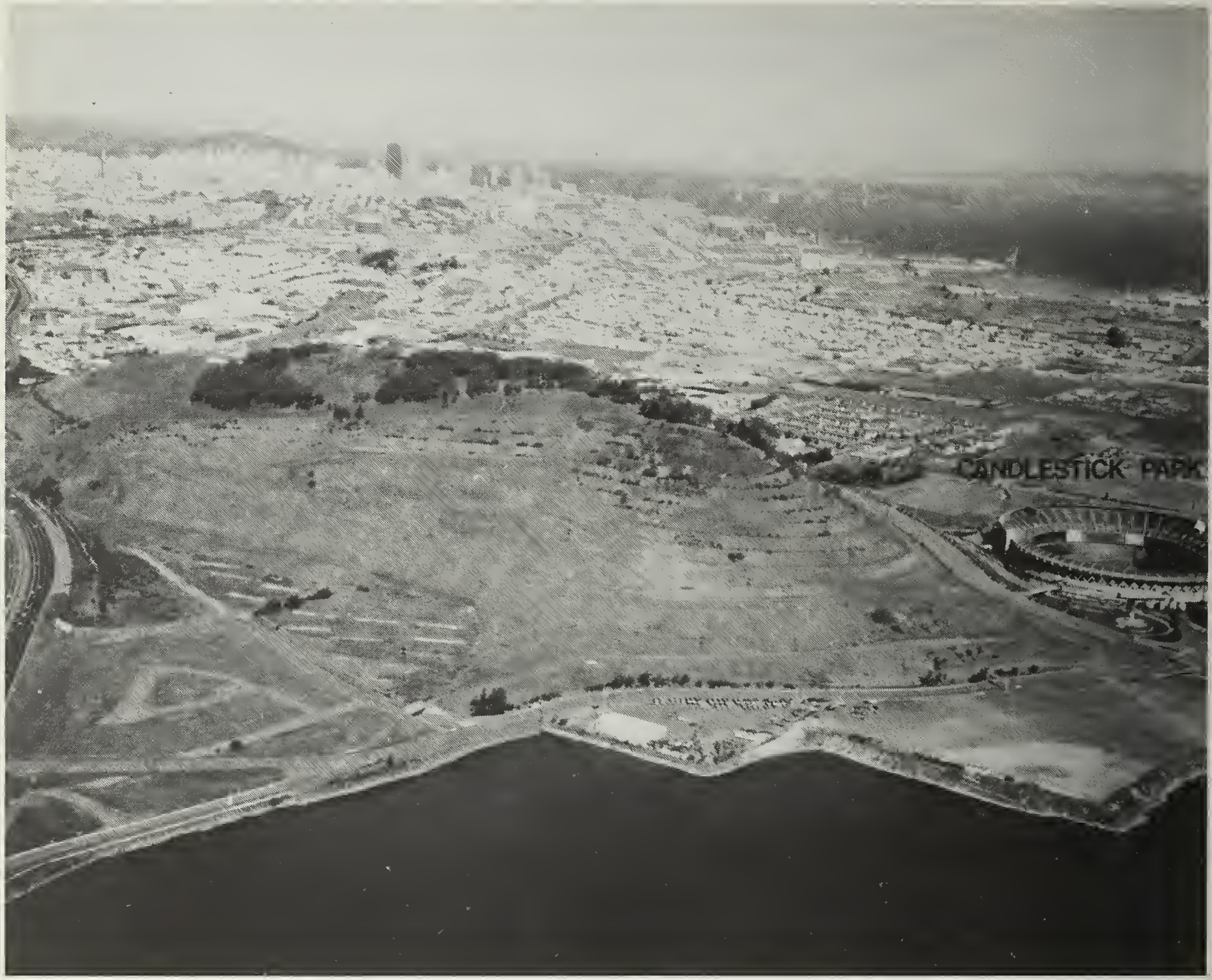


FIGURE 7. AERIAL VIEW LOOKING NORTH

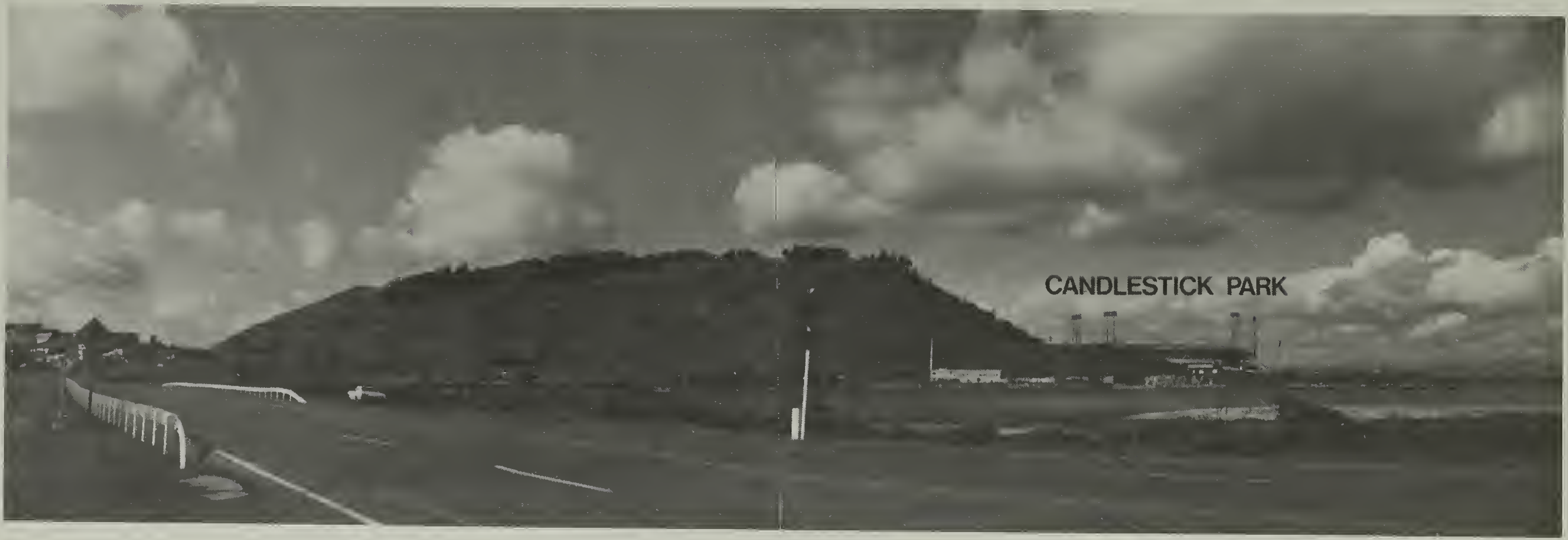


FIGURE 8. GROUND VIEW LOOKING NORTH

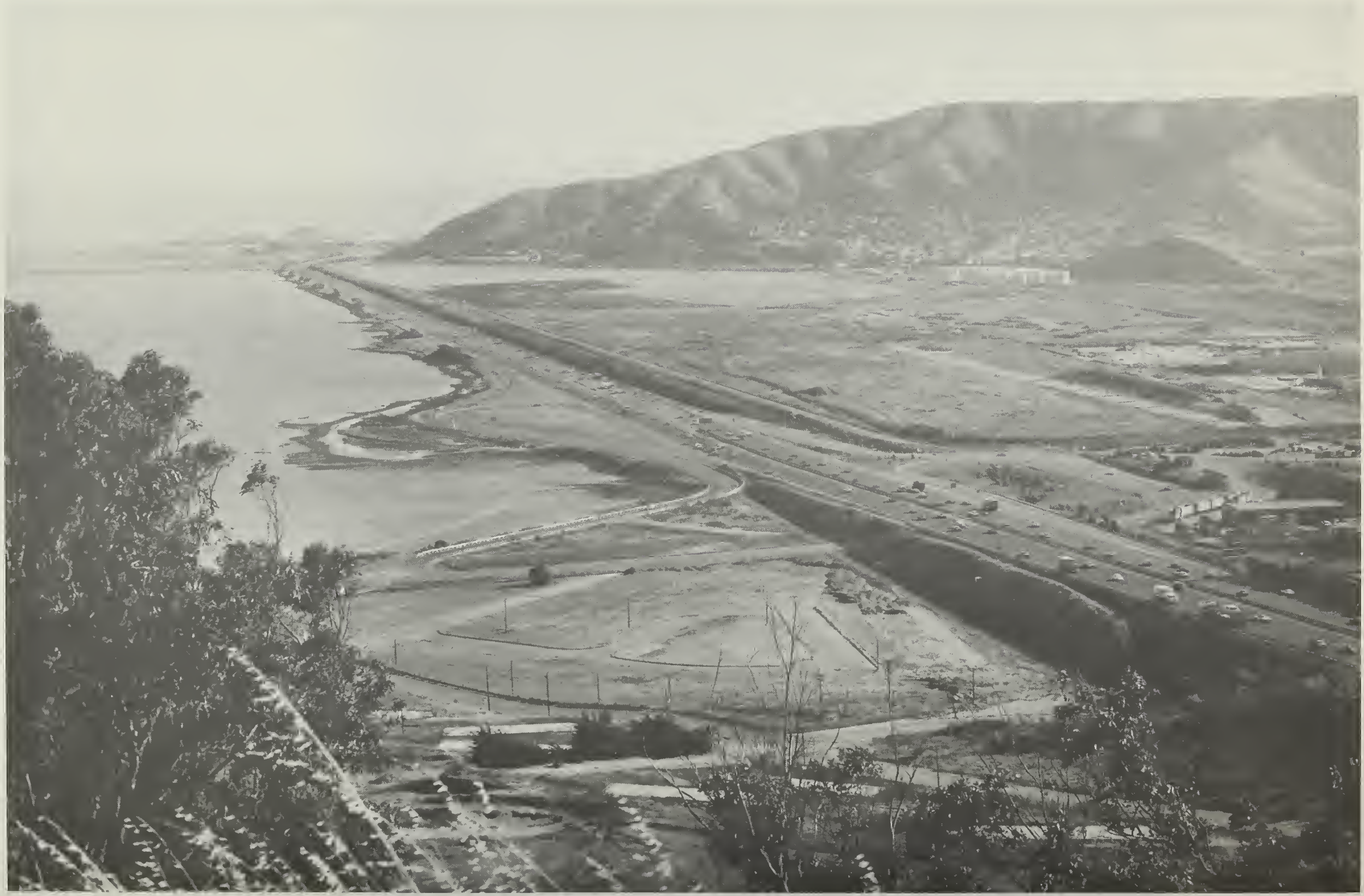


FIGURE 9. VIEW LOOKING SOUTH FROM TOP OF BAYVIEW HILL

The rocks on the site can be classified in three major types:

Greenstone:	A very fine- to medium-grained altered[1] volcanic rock with primarily basaltic[2] composition ranging in color from greenish to yellow-orange or rust-brown.
Sedimentary rocks:	Fine- to medium-grained sandstone with smaller amounts of interbedded shales and siltstones. The rocks are brown where weathered and dark grey where fresh.
Chert:	A silica-rich microcrystalline sedimentary rock. At the site it is either a thinly-layered sequence of red rock, yellow-white or green rock or a massive red colored rock with baked slickensided (polished and striated) surfaces.

As shown in Figure 6, the distribution of rock types on the site consists of a central band of sandstone and shale roughly 400 feet wide, flanked on both sides by greenstone. The hill is capped by chert, which is highly resistant to weathering, and chert exposures are scattered over the site. A localized instance of serpentinization[3] was noted at the site and other exposures of this material may be encountered, although not in any volume that would affect the proposed development.

The residual soils that formerly covered the upland portions of the site showed large shallow unstable areas but have been almost completely removed by earthwork over the last 25 years.

---

[1] By gradual process of changes due to pressure and chemical composition.

[2] A type of volcanic rock which is basically igneous, rich in iron and magnesium and poor in silica.

[3] Serpentinization is described as a chemical alteration of rock frequently resulting in weak, unstable sections; it is associated with shear zones (areas caused by shearing and faulting of large blocks or rock at great depths below the surface of the earth). The serpentinization process is not completely understood by geologists.

The lower portions of the site are underlain by residual soils formed by the in-place weathering of rock and alluvial[1] soils formed by erosion and deposition. A former lagoon area in the southwest portion of the site was partly filled by natural alluvial deposition due to erosion of the surrounding hills and completely filled (more than eight feet) for foundation support of old government housing (now removed) and the construction of Harney Way. Dames and Moore indicate that the soft fill deposits have probably consolidated[2] under existing loads.

Bayview Hill has been a source of sanitary land fill since 1963, and about 2 million cubic yards of earth and rock have been excavated.

Two moderately large recent landslides and numerous slipouts and slumps are observed at the site. The slopes involving greenstone and chert would probably remain stable except when extremely weathered. The major problem slides occur in sedimentary rocks (the interbedded sandstones and shales), which are susceptible to erosion and slumping when sheared and weathered.

The project site lies within a region of high seismic activity. The San Francisco Seismic safety investigation[3] indicates that no active faults[4] are known to exist within the City of San Francisco. Two active faults can affect the project site:

---

[1] Deposits of sand, mud, etc., (sedimentary matter) formed by the action of heavy water.

[2] The decrease of the porous spaces of Bay mud over a period of several years, and the forcing together of clay grains, thereby increasing the carrying strength of the soil.

[3] John A. Blume and Associates, Seismic safety investigation, prepared for the San Francisco Department of City Planning, 1974.

[4] A fault is a surface or zone of rock fracture along which there has been displacement ranging from a few inches to a few yards in scale. Inactive faults are those along which no movement is known to have occurred in the last 10,000 years.

the San Andreas Fault is approximately five miles west of the site in the Pacific Ocean and the Hayward fault lies approximately thirteen miles to the east.

The Blume report estimated the intensity of future ground shaking at most of the site (based on the magnitude and proximity of the 1906 earthquake) to be weak (Category E) with the exception of the fill area in the southwest corner which is classified as violent (Category B). A section of the site near the entrance of Blanken Avenue on the west is classified as very strong (Category C).[1]

The Blume report classifies the portions of the site immediately adjacent to Harney Way as areas of major potential liquefaction hazard and major potential subsidence hazard (Figure 6, page 15).[2]

3. Climate and Air Quality

a. Climate and Comfort

The climate of San Francisco is dominated by the sea breeze characteristic of marine climates. As a result of this steady stream of marine air, there are few extremes of heat or cold. Temperatures exceed 90 degrees on an average of once a year and drop below freezing less than once a year. The warmest month is September, with an average daily maximum temperature of 69 degrees; the coolest is January, with an average daily maximum of 56 degrees. Rainfall in the San Francisco-San Mateo area averages 19.5 inches per year, with the heaviest fall occurring from October through May. Peak storms have been known to deliver an average of 4.55 inches of rain during January, the month of heaviest precipitation.[1]

---

[1] B: violent. Fairly general collapse of brick and frame structures. Lateral displacement of streets, bending of railroad rails and ground fissuring.

C: very strong. Masonry badly cracked with occasional collapse of frame buildings.

E: weak. Occasional fall of brick chimneys and plaster.

[2] Subsidence: subject to settling of the earth.

Liquefaction: the transformation of granular material from a solid state into a liquefield state as a consequence of increased stress often the result of energy released by earthquakes.

The Bayview-Candlestick Hill is often exposed to winds and cool weather.[2] The project site is located downwind of the Alemany Gap, by far the largest airflow pass through San Francisco (Figure 1, page 3). Because of topographic effects, Candlestick Park is foggy at times when all other areas of the City are clear;[3] however, residents of the Little Hollywood area state that typically the fog stops short of their neighborhood and the site.[4]

Because the site is downwind of the nearly-constant flow of air through the Alemany Gap, the prevailing wind direction at the site shows less variability than other areas of San Francisco. In summer the winds are almost exclusively from the southwest and west due to the topography (as contrasted to most areas of San Francisco, where summer winds are from the northwest) of Alemany Gap and the John McLaren Park hill (Figure 2, page 4). Winds during other seasons are more variable. They are highest in spring and summer, when afternoon winds exceed 15 miles per hour 85 percent of the time and may reach as high as 35-40 miles per hour.[1] The potential for uncomfortable outdoor conditions[2] on the site is high. Candlestick Park, immediately east of the site, is well known for uncomfortable conditions due to wind, fog, and temperatures.

---

[1] U.S. Department of Commerce, Local climatological data, San Francisco Federal office building, 1972.

[2] W. A. Perkins and J. E. Cermak, Investigations of the Candlestick Park wind problem, Vol. III: Conclusions, recommendations, and summary of investigations. Metronics Associates, Inc., August 1963.

[3] H. Gilliam, Weather of the San Francisco Bay Region (Berkeley: Univeristy of California Press), 1962.

[4] Henry Schindel, President of the Visitacion Valley Improvement Association, personal interview March 28, 1976.

Wind tunnel studies of the project site were conducted by Environmental Impact Planning Corporation (Appendix B). The tests showed that large variations in wind exposure were found over the site. The upper areas were very windy (45 to 70 miles per hour) especially along the flat terraces. The western portion is sheltered by the elevated James Lick Freeway, particularly during westerly winds. The rest of the site is moderately windy (21 to 44 miles per hour), except for small areas sheltered by local terrain features.

b. Air Quality

Air quality in San Francisco is generally good, with contaminant levels exceeding the ambient air quality standards only a few days a year. Persistent westerly winds and San Francisco's upwind position with respect to major pollutant sources combine to give San Francisco possibly the cleanest air in the Bay Area.

In determining the quality of air, several basic pollutants are considered:

--Carbon monoxide (CO) is a clear, odorless gas which in high concentrations can cause dizziness, unconsciousness, and even death. The major sources of carbon monoxide is the automobile. High concentrations of carbon monoxide are mainly a local problem, occurring near areas of heavy auto traffic when ventilation is poor.

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[1] Perkins and Cermak, op. cit.

[2] When winds and temperature cause the body (without more than one layer of clothing) to lose heat faster than it is generated.

--Photochemical oxidant. Photochemical oxidant--also known as smog--results from a complicated reaction between nitrogen dioxide and organic compounds under the influence of ultraviolet rays of sunshine. Production of oxidant smog is promoted on warm, sunny days when ventilation is low.

--Oxides of nitrogen. These gases, mainly nitric oxide (NO) and nitrogen dioxide (NO_2), are formed during combustion at high temperatures. Their main source is automobiles. They react with sunlight in the atmosphere and are involved in the production of photochemical oxidant.

--Suspended particulates. Suspended particulates are liquid or solid particles suspended in the air. Much of this particulate matter is of natural origin; in industrialized areas man-made varieties are far more prevalent.

--Hydrocarbons. Hydrocarbons are the result of incomplete combustion and range in complexity from simple gases to complex compounds. This pollutant is important because of its ability to react in the atmosphere with oxides of nitrogen to form photochemical smog.

Table 1 summarizes ambient air quality standards applicable in California. The State standards are specific concentrations and durations of air pollutants that reflect the relationship and the intensity and composition of pollution to effects on humans such as watering of the eyes, aggravation of respiratory maladies, etc. The State standards are target values; no timetable exists for their attainment.

The Federal primary standards represent levels of air quality necessary for protection of public health, with an adequate margin of safety. The provisions of the Clean Air Act as amended in 1970 require that by 1975, or by 1977 if an extension is granted, the Federal standards should not be exceeded more than once per year.[1]

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[1] In 1974 the standard for oxidants was exceeded on four days, and the 8-hour standard for carbon monoxide was exceeded on two days.

TABLE 1

Ambient Air Quality Standards

Pollutant	California Standards		National Standards	
	Averaging Time (hours)	Concentration	Averaging Time (hours)	Concentration
Photochemical oxidant	1	0.10 ppm[*]	1	0.08 ppm
Carbon monoxide	12	10 ppm	8	9 ppm
	1	40 ppm	1	35 ppm
Nitrogen dioxide	1	0.25 ppm	Annual	0.05 ppm
Sulfur dioxide	24	0.04 ppm	24	0.14 ppm
	1	0.05 ppm	---	---
Suspended particulates	Annual geo-metric mean[***]	60 g/m^3[**]	Annual geo-metric mean	75 g/m^3
	24	100 g/m^3	24	260 g/m^3

Source: California Air Resource Board, California Air Quality Data, Vol. V, No. 3, July-September 1973.

[*] Parts per million.

[**] Micrograms per cubic meter.

[***] The annual geometric mean is the mean of the natural logarithms of concentration. This is used because it has been found that air pollutant concentrations,over a long time, tend to be distributed log-normally (the logarithm of concentration has a normal, or Gaussian distribution).

The project site currently contains no pollutant sources; however, it is immediately adjacent to and normally downwind of U.S. Highway 101. It is also occasionally exposed to pollutants from congested traffic volumes on Harney Way and U.S. 101 generated by crowds at Candlestick Stadium.

Current carbon monoxide concentrations on the site have been estimated.[2] under adverse meteorological conditions (e.g., light winds and high atmospheric stability). During the peak traffic hour, concentrations at the west end of the site are estimated to be about 45 percent of the national ambient air quality standard. The peak eight-hour average concentration, calibrated for 1975, is 66 percent of the standard.

The Bay Area has been designated as an Air Quality Maintenance Area (AQMA). This necessitates the preparation of an Air Quality Maintenance Plan (AQMP), as part of the State Implementation Plan. Preparation of the Plan began in January 1976, and will take two years to complete. The Plan will consist of control measures and strategies that will maintain the National Ambient Air Quality Standards (NAAQS) once they have been attained. The Bay Area AQMP is being developed by a task force under the Association of Bay Area Governments. The process is overseen by the California Air Resources Board, and the eventual plan must be approved by the Environmental Protection Agency.

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[2] Methodology is described in Appendix C.

4. Traffic, Transportation, Circulation and Parking

Highway 101 (James Lick Freeway) runs adjacent to the proposed project (Figure 10). On normal days (i.e., days not including a special event at Candlestick Park), the freeway carries some 123,000 vehicles on nine lanes (four southbound and five northbound, uphill). During the afternoon peak hour (5:00 to 6:00) the freeway carries 5,600 vehicles southbound and is at about 70 percent of capacity (8,000 vehicles per hour is capacity). Northbound morning peak-hour volumes are higher as traffic moves uphill and is slower, reaching 6,500 vehicles per hour, or about 80 percent capacity.[1] Caltrans plans a sixth northbound lane but no funds have yet been appropriated.

Three of the four single-lane freeway ramps connect directly to Harney Way through two traffic lanes. The southbound off-ramp connects to one eastbound lane through the Alanna Way underpass of the freeway. Harney Way is a five-land arterial to Candlestick Park; three lanes are westbound and two lanes eastbound on non-event days. When a major event is held at Candlestick Park, all lanes on Harney Way are inbound for pre-event and outbound for post-event traffic. Two of Blanken Avenue's three lanes are westbound and one eastbound. Jamestown Avenue's five lanes are reversible before and after stadium events. Trucks are not allowed on Blanken and Jamestown Avenues.

Existing traffic volumes on Harvey Way and Blanken and Jamestown Avenues average two to three thousand cars per day per street.[2] These volumes are well below the streets' capacities, although any non-local volume through a residential neighbor-

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[1] California Department of Transportation (Caltrans), Traffic counts, 1974.

[2] No traffic count has been taken, traffic volume is a rough estimate.

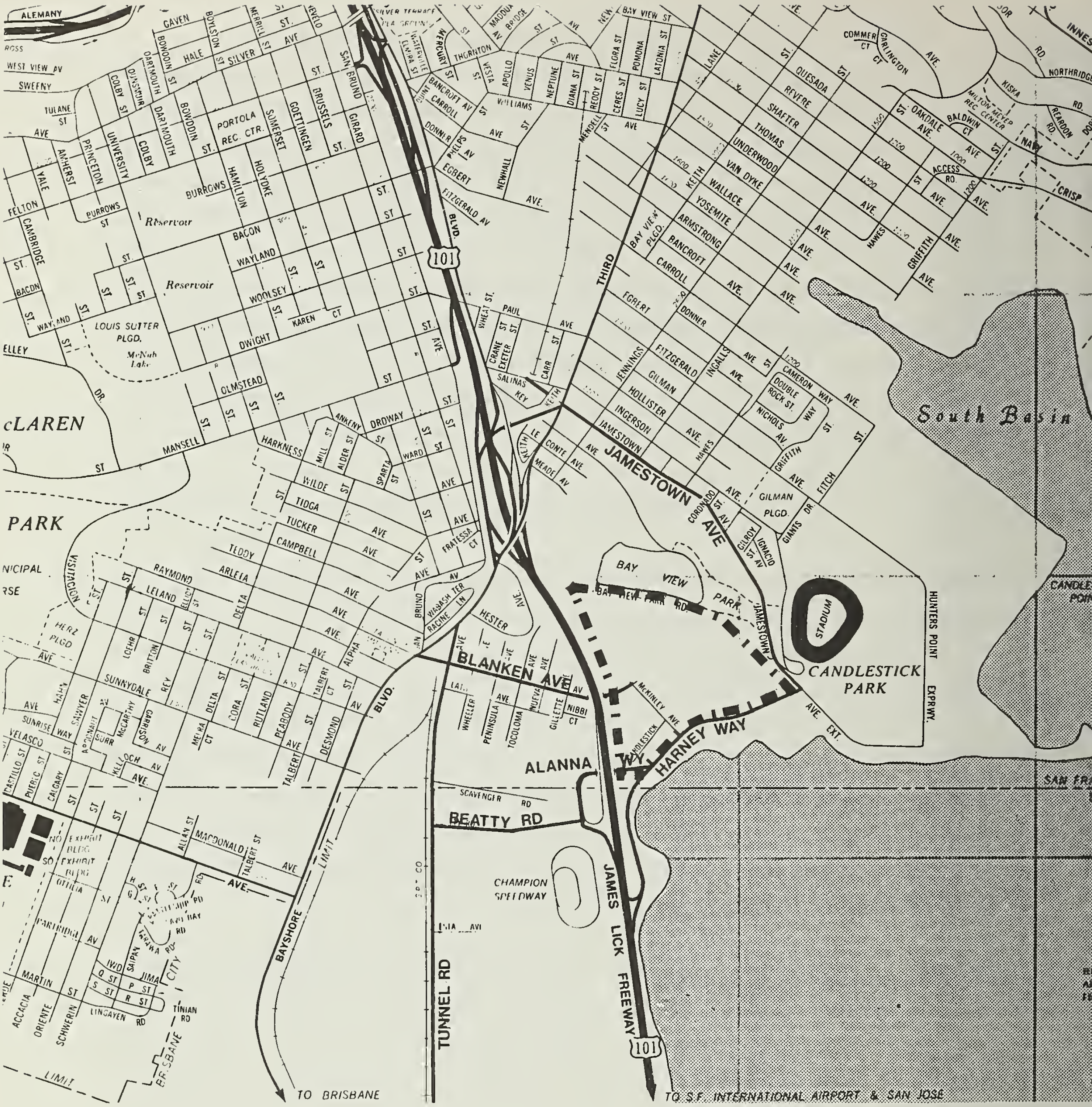

FIGURE 10. LOCAL ACCESS MAP

hood (i.e., Little Hollywood) is undesirable. (Blanken has a westbound capacity of 1,100 vehicles per hour and an eastbound capacity of 750 vehicles per hour; Harney Way and Jamestown Avenue have capacities of 1,600 vehicles per hour east- and northbound, and 2,400 vehicles per hour west- and southbound).

On days of events at Candlestick Park, a single hour's volume on Harney Way or Jamestown Avenue may reach two or three thousand vehicles.[1] The highest hourly volume recorded for Blanken Avenue was 1,272 vehicles (on Sunday, September 12, 1972, 10:00 to 11:00 a.m.; count by San Francisco Traffic Department); the count was made shortly before the Candlestick Park interchange at Highway 101 was opened. Usage of Blanken Avenue has decreased since the interchange was constructed. Up to 2,000 vehicles have been counted in one hour using the southbound on-ramp.

Baseball and football games (the most common events at Candlestick) vary in the traffic demands they place on the roads near the project site. Weekly baseball games are usually finished by 3:00 p.m., before the commute period, unless extra innings are played or under special circumstances, such as playoff games. Double headers are played on weekends.

Football games are generally played on Saturday and Sunday, although Monday night games are held once or twice a season.

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[1] Information on Candlestick stadium traffic is from conversations with Richard Evans, San Francisco Traffic Department.

Crowds have been observed to require the following amounts of time to clear after games.[1]

Crowd Size	Minutes to Clear Traffic
40,000	32
46,00	53
47,000	55
50,000	90
50,000 with rain	120

Monday night football games have created special problems for Blanken Avenue. While 2.7[2] is the average auto occupancy for weekend football games, occupancy drops to 1.9 on Monday night. Up to 2,000 autos in excess of parking capacity at Candlestick have been observed to arrive for these games. At these times, cars using the northbound off-ramps are routed away from the park via Blanken Avenue by the San Francisco Police Department. These occasions are the only times Blanken Avenue is needed for handling Candlestick Park traffic, since the freeway interchange and routes on Alanna and Harney Ways and Jamestown Avenue can accommodate other park traffic.

If the new extension of Beatty Road continues across the railroad tracks to Old Bayshore Boulevard, Blanken Avenue may not be needed for any Candlestick Park traffic. This extension could serve as the outlet for all overflow traffic. Both the extension and new freeway interchange at Sierra Point (on the James Lick Freeway due east of Brisbane), to which the extension would connect, are under study by the City of Brisbane and Caltrans and may be built in the next two to five years (no funds have yet been appropriated).

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[1] The information is based on traffic study by the San Francisco Traffic Department. The crowd size could not be judged prior to the study, hence the irregular interval pattern. Richard Evans, September 1975.

[2] Ibid.

There are no marked parking areas on the site. During major events at Candlestick, vehicles park on part of the site and may number 400 to 700 for a capacity crowd.

The eastern terminus of Municipal Railway Bus 29 is at Blanken Avenue and Gillette near the freeway, one block west of the project site. It connects with major lines and stops at the Southern Pacific Railroad's Bayshore Station. Six commuter trains stop there daily, three in the morning and three in the afternoon (Figure 11).

5. Vegetation and Wildlife

Vegetative cover is sparse over much of the project site, consisting mainly of scattered small shrubs, a few small pines, cedars and eucalyptus trees, and a limited cover of grass over some of the flat graded terraces on the lower portions of the property. The trees range in height from three to fifteen feet. The sizes of the tree trunks range from one inch in diameter up to approximately four to five inches in diameter. The major visible foliage massing on Bayview Hill, an eucalyptus grove on its crest, is in Bayview Park. There are no endangered plant species on the site.[1] Appendix E contains a list of plants found on the project site.

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[1] California Native Plant Society, Inventory of rare and endangered plants of California, 1975.

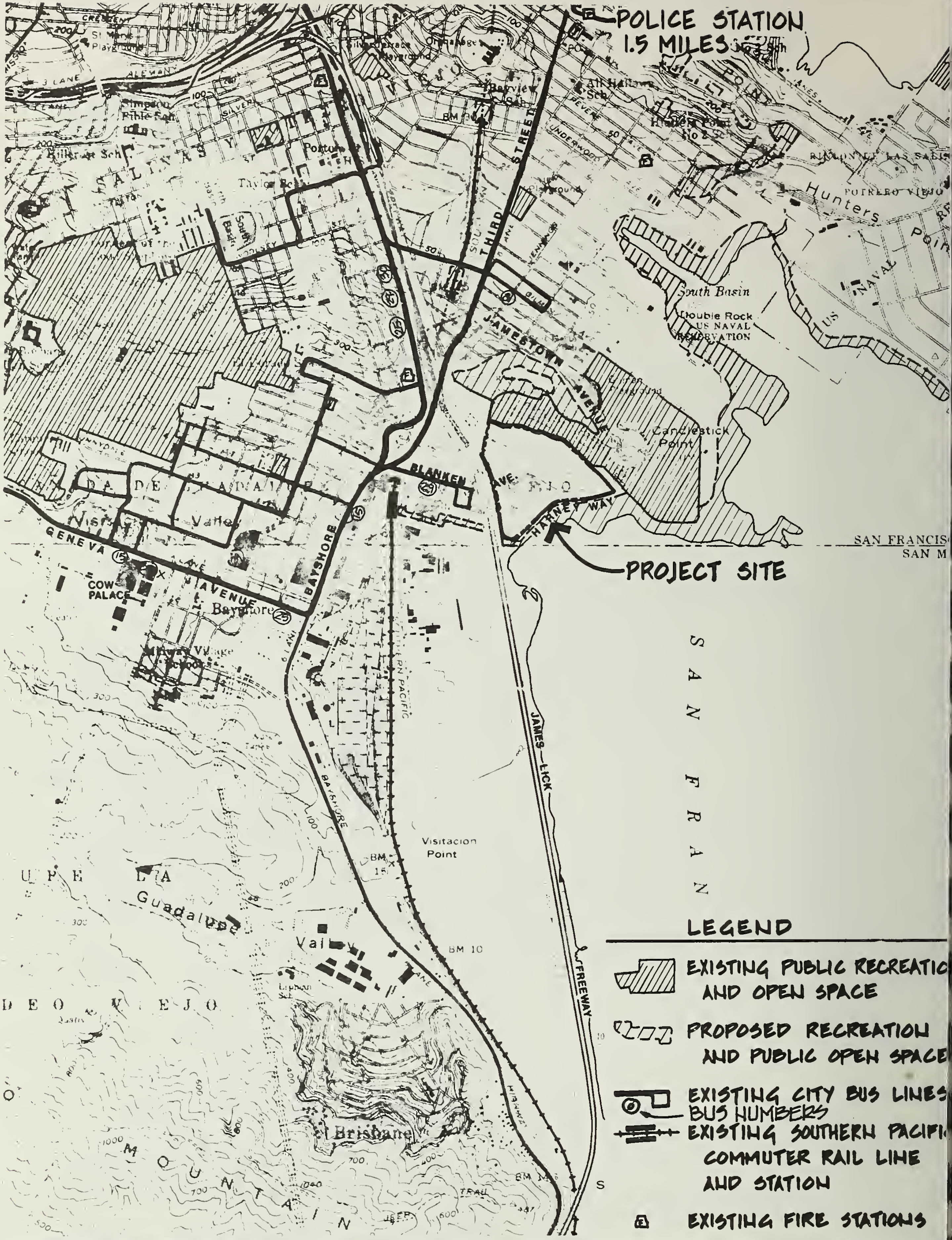

FIGURE 11. EMERGENCY SERVICES, PUBLIC TRANSIT AND RECREATION OPEN SPACE

Wildlife is limited by the availability of suitable cover and food and by human and vehicular intrusions. The grassy areas on the site provide habitat for small rodents, primarily the California vole, which attract the occasional sparrowhawk. Birds represent the dominant wildlife element; most are transient visitors to the site. Typical species include the mockingbird, robin, goldfinch, sparrow, and other species able to exist in the urban environment.[1]

6. Land Uses

The project site has had two major uses in recent times: Units of temporary housing were constructed during World War II and the site was cut and terraced for the placement of the structures; and in the last decade after removal of the buildings, the site was used as a source of sanitary landfill.

At present the site is used for parking during a capacity event at Candlestick Park. The area is zoned partly R-1 (one family Residential) and the rest M-1 (light industrial) (Figure 12). Height and bulk limit is 40-x.

7. Archaeology

An archaeological reconnaissance of the site was undertaken by Miley Paul Holman, Assistant Curator of the Treganza Anthropological Museum at San Francisco State University. As noted in the report, which is included as Appendix F, "No surface indications of archaeological remains on or near the site were encountered during the reconnaissance. I

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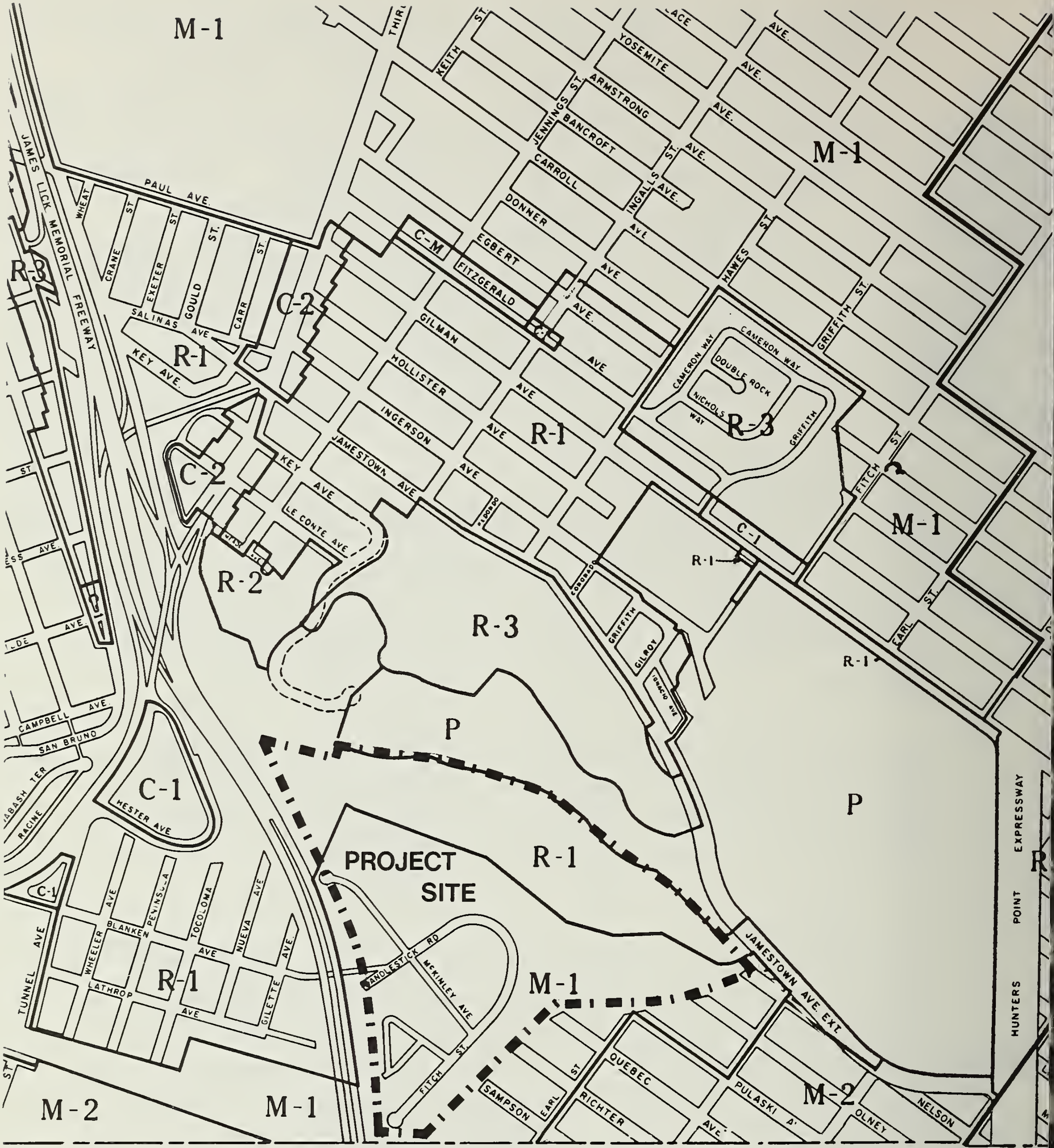
[1] Conversation with Rod Jackson, Wildlife Ecologist, May 1976.



R-1	ONE-FAMILY RESIDENTIAL DISTRICT
R-3	LOW-MEDIUM DENSITY MULTIPLE RESIDENTIAL DISTRICT
C-1	NEIGHBORHOOD SHOPPING DISTRICT
C-2	COMMUNITY BUSINESS DISTRICT
M-1	LIGHT INDUSTRIAL DISTRICT
M-2	HEAVY INDUSTRIAL DRISTICT
P	PUBLIC USE DISTRICT

HEIGHT CLASSIFICATION 40-X

FIGURE 12. ZONING MAP

NOR

doubt the existence of any remains, since the midden or refuse found on the site did not resemble archaeological middens discovered in the area."

8. Demography

The project site is currently uninhabited. The adjacent neighborhoods include Visitacion Valley and Little Hollywood west of the project and the South Bayshore Planning District (as designated by the San Francisco City Planning Department) to the north and northeast (Figure 13). The 1970 census offers the most recent demographic data on the population of Visitacion Valley and South Bayshore. Table 2 provides basic information on family income and Table 3 contains information on the employed labor force.

Nine percent of South Bayshore residents and 14 percent of people living in Visitacion Valley were employed in the Professional and Technical and Managerial, Administrative, and Proprietary categories, as contrasted to 24 percent for the entire city. The percentage of residents employed in the clerical category were 25 percent for South Bayshore, 31 percent for Visitacion Valley and 29 percent for the entire City. In contrast, 17 percent of Bayshore residents and 18 percent of Visitacion Valley residents were employed as Operatives and Transportation Equipment Operatives, as compared to 10 percent in San Francisco. This clustering of occupations reflects the neighborhood's lower educational attainment, traditional minority employment patterns, and unequal employment opportunity.[1]

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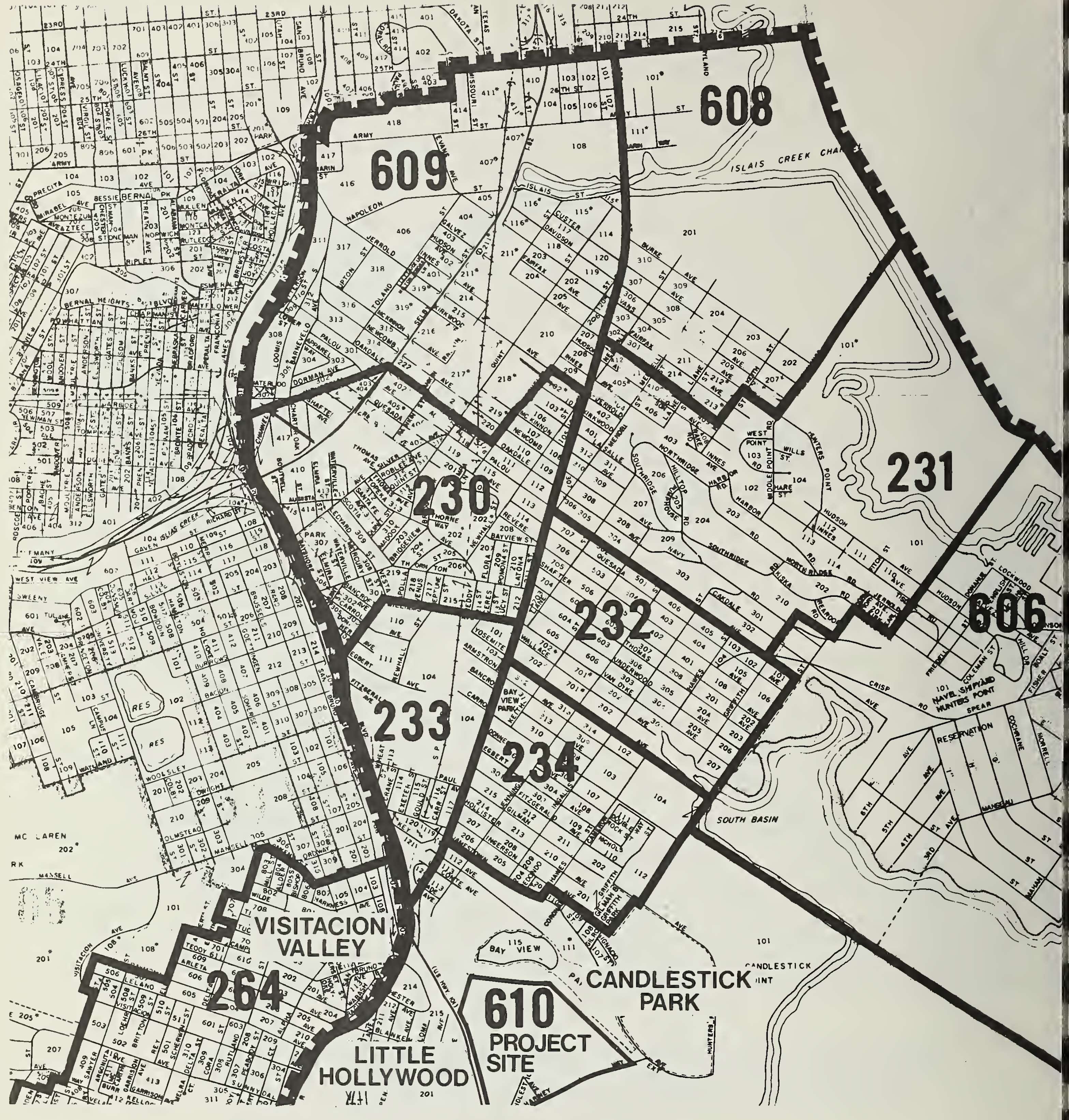
[1] Dukes-Dukes and Associates, Inc., Bayview Hunters Point neighborhood improvement plan: A study of the Bayview Hunters Point Community, San Francisco, n.d.



▬ ▬ ▬ ▬ ▬ BOUNDARY, SOUTH BAYSHORE PLANNING DISTRICT

000 CENSUS TRACT

FIGURE 13. PLANNING DISTRICT/CENSUS TRACTS

TABLE 2

Family Income, 1970

	All Families	Under $4,000	$4,000-$7,999	$8,000-$9,999	$10,000 and over	Median Income
San Francisco	165,342	14%	21%	12%	53%	$10,503
South Bayshore	7,156	23%	25%	12%	40%	N/A
Visitacion Valley (Census Tract 264)	3,179	14%	20%	12%	55%	10,740
Census Tracts:						
230	2,251	11%	22%	11%	56%	10,860
231	1,967	34%	34%	10%	23%	5,776
232	1,037	16%	24%	13%	47%	9,444
233	232	12%	19%	17%	53%	10,316
234	792	38%	25%	11%	27%	5,804
606	367	42%	30%	16%	13%	5,250
608	29	14%	28%	10%	48%	9,833
609	48	88%	--	--	13%	2,455
610	383	7%	15%	14%	64%	12,763

Source: 1970 Census

Note: percentages may not sum to 100 due to rounding.

TABLE 3

Occupations, 1970

	San Francisco	South Bayshore	Visitacion Valley
Total employed	318,311	9,317	4,923
	100%	100%	100%
Professional & technical	18%	6%	9%
Managerial, administrative, & proprietary	8%	3%	5%
Sales workers	7%	3%	5%
Clerical	29%	25%	29%
Craftsmen & foremen	8%	12%	15%
Operatives & transport equipment operatives	10%	17%	18%
Laborers	4%	10%	7%
Service workers	14%	22%	12%
Private household workers	2%	2%	1%

Source: Dukes-Dukes and Associates, Inc., Bayview Hunters Point Neighborhood Improvement Plan: a study of the bayview Hunters Point community, San Francisco, n.d.

The 1970 census indicated a 17 percent unemployment rate in the South Bayshore for combined male and female workers, the rate was 6 percent for the entire city. The Naval Shipyard closed in 1973, with a loss of over 5,000 jobs. Since the closing of the shipyard no new development has employed the 5,000 people, the city has suffered an economic recession and the unemployment rate in the area could be higher than the 1970 figure.

In terms of ethnic characteristics, Little Hollywood and Visitacion Valley had a smaller percentage of Blacks than most of the Bayshore Area. Visitacion Valley had approximately 24 percent Black (2,940) and 15 percent Spanish surname or Spanish language (1,810). Little Hollywood and Bret Harte had 6 percent Black (380) as compared to over 50 percent for most of the South Bayshore area.

9. Noise

Noise on the project site originates primarily from traffic on Highway 101 although capacity events at Candlestick Park would generate noise from stadium traffic passing the site on Harney Way. An accoustic study of the site prepared by Buonaccorsi and Associates (Appendix G) shows that the entire site is exposed to a noise level of 60 decibels or more on the A - scale [1] by noise generated from Highway 101[2].

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[1] Sound waves travelling outward from the source exert a force known as the sound pressure level (commonly called sound level), measured in decibels (dB). dB(A) is a generally accepted unit of loudness which is corrected for the variation in frequency response of the typical human ear at commonly encountered noise levels.

[2] This measurement takes into account sound levels, type of traffic, speed of traffic, and the grade of Highway 101 using the method outlined in Transportation Noise and Voice from Equipment Powered by Internal Combustion Engines, Wyle Laboratories, U.S. Environmental Protection Agency, P.B. 208-660, 1971 Springfield, Virginia. See Appendix G.

Aircraft operations at San Francisco International Airport do not generate levels equal to or exceed a Community Noise Equivalent Level (CNEL) of 60 at the site.[1]

In Figure 14 CNEL contours of present sound conditions are shown on the project site based on traffic information provided by Caltrans in 1974. A CNEL of 60 is equivalent to normal speech at three feet and 5dB(A) above the Environmental Protection Agency's level for an acceptable outdoor residential sound environment. Figure 15 shows the land use compatability chart for community noise prepared by the San Francisco Department of City Planning in the Transportation Noise Section of the Environmental Protection Element of the Comprehensive Plan for San Francisco.[2] By comparing the land use chart to the noise contours on the project site, the compatability of the noise environment with land uses may be examined. The noise level on Harney Way during a major event at Candlestick would have little impact on the overall noise conditions on the site since the ambient noise level is already high due to the traffic on Highway 101.

Although the volume of vehicular traffic is expected to increase, the average noise level of individual vehicles is

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[1] San Francisco International Airport 1973 Environmental Impact Report - San Francisco Airport Expansion, County of San Mateo, California.

The CNEL has approximately the same values as L_{dn}

[2] Adopted by the City Planning Commission by Resolution #7244, September 1974.

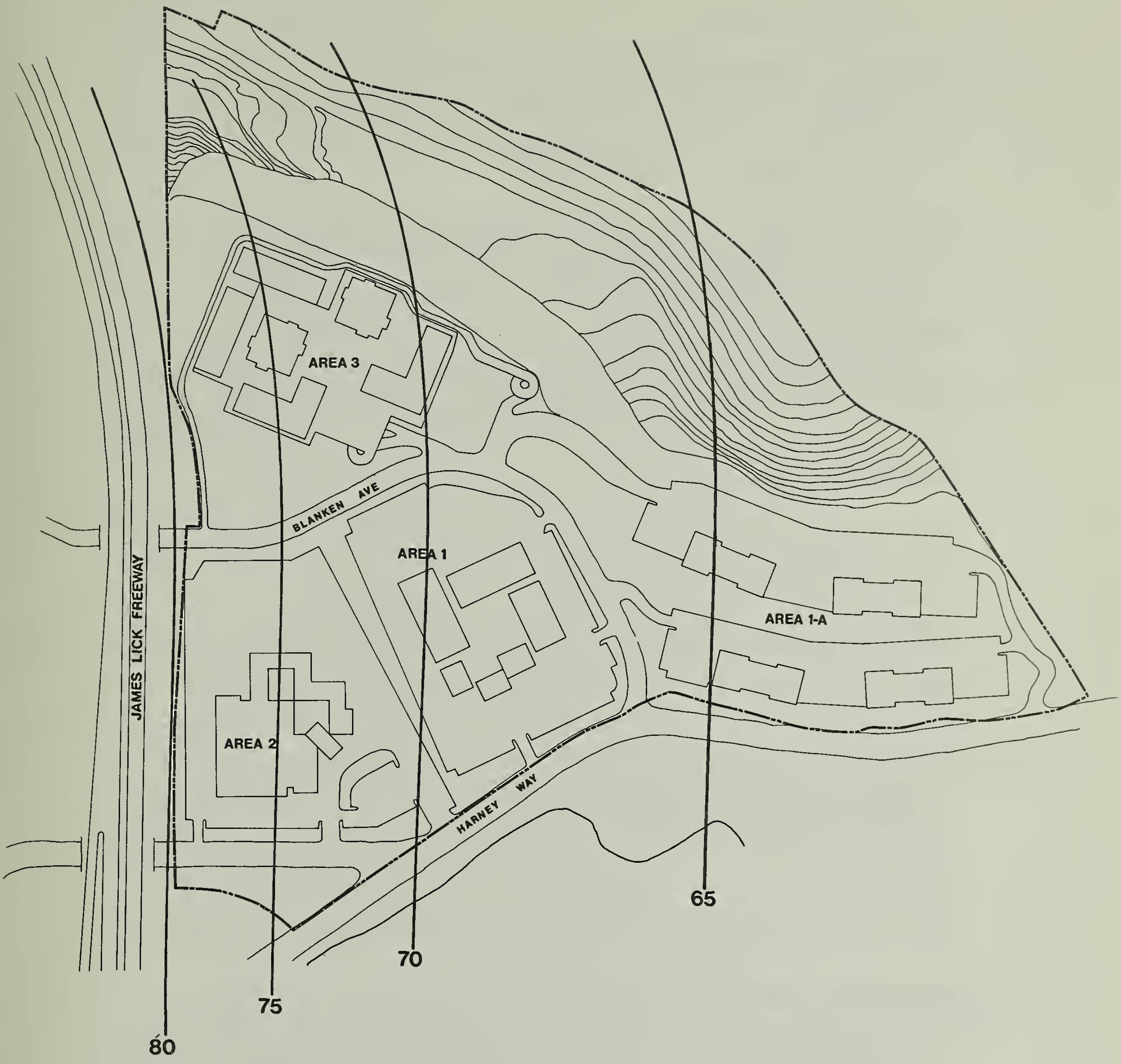
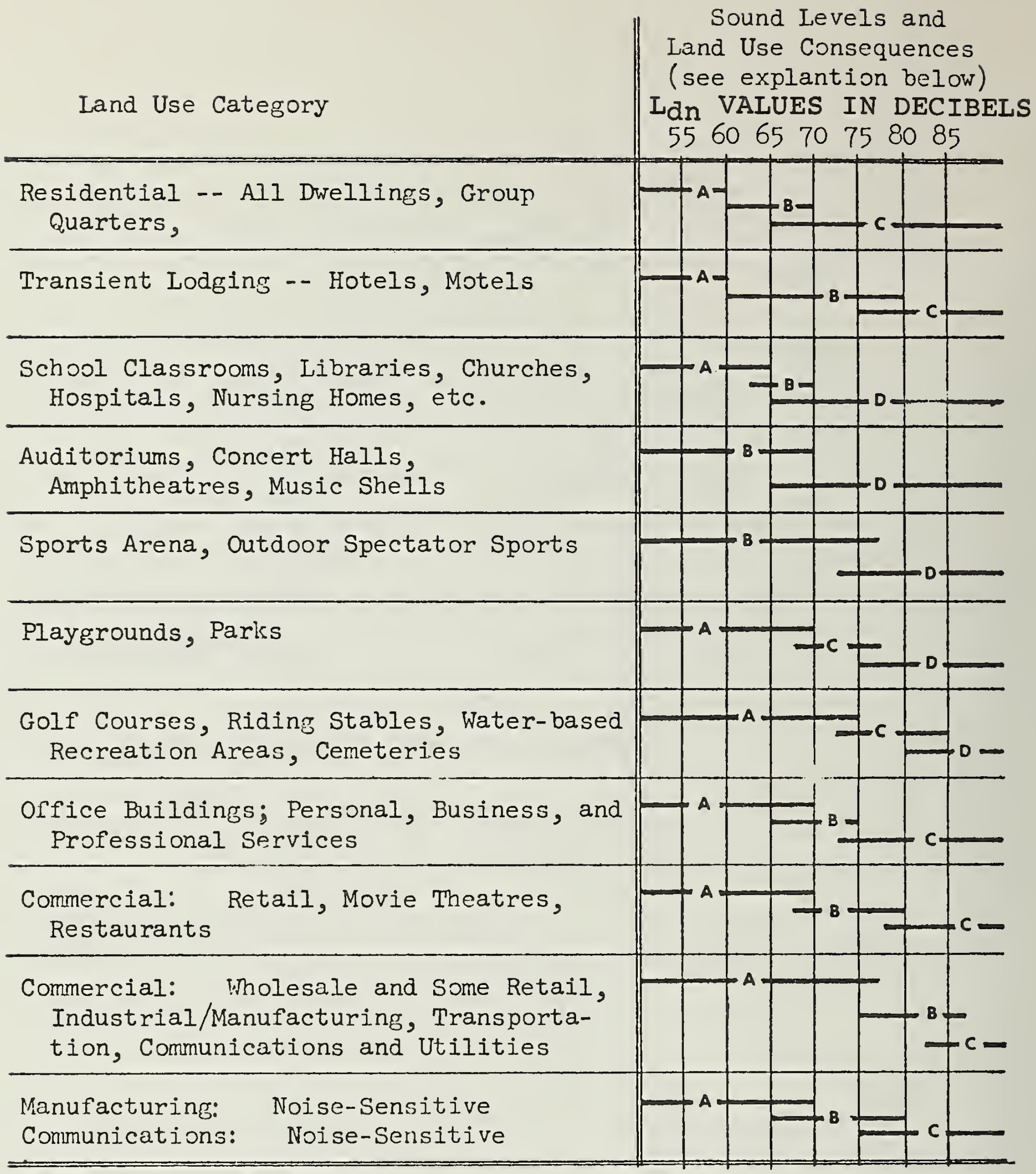


FIGURE 14. NOISE EXPOSURE CONTOURS (CNEL) AT THE PROJECT SITE (1974)

NORTH



Explanation of Land Use Consequences

A. Satisfactory, with no special noise insulation requirements.
B. New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design.
C. New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
D. New construction or development should generally not be undertaken.

Source: San Francisco Department of City Planning, Transportation noise section of the environmental protection element of the Comprehensive Plan of the City and County of San Francisco. Sept. 19

FIGURE 15. LAND USE COMPATIBILITY CHART FOR COMMUNITY NOISE

expected to decrease because California Vehicle Code, Section 27160 sets maximum permitted noise levels for present and future new vehicles sold in the State.

Research indicates (Appendix G) that noise levels may vary with different meteorological conditions, but additional analytical development and experimental validation is required before definitive conclusions can be reached. Buonaccorsi and Associates, acoustical engineers, predict that climatic conditions on the project site would have minimal effect on the CNEL contours.

10. Public Utilities

a. Utilities

1) Water

There is now no water service on the project site. An 8-inch main located in Blanken Avenue east of the James Lick Freeway runs to the east boundary of the site. A 12-inch water line is to be constructed by the City, as part of a 1972 bond issue, from the Sunset Reservoir to the intersection of Campbell Avenue and Goettigen Street (Figure 16); however, no time schedule has been set by the City.[1]

2) Electricity

Pacific Gas and Electric Company's gas and electric lines run adjacent to the site and provide possible connections to the proposed project. There are currently no natural gas or electrical connections on the site.

3) Telephone

Pacific Telephone and Telegraph Company has connection facilities at its Third Street and Paul Avenue building. Conduits

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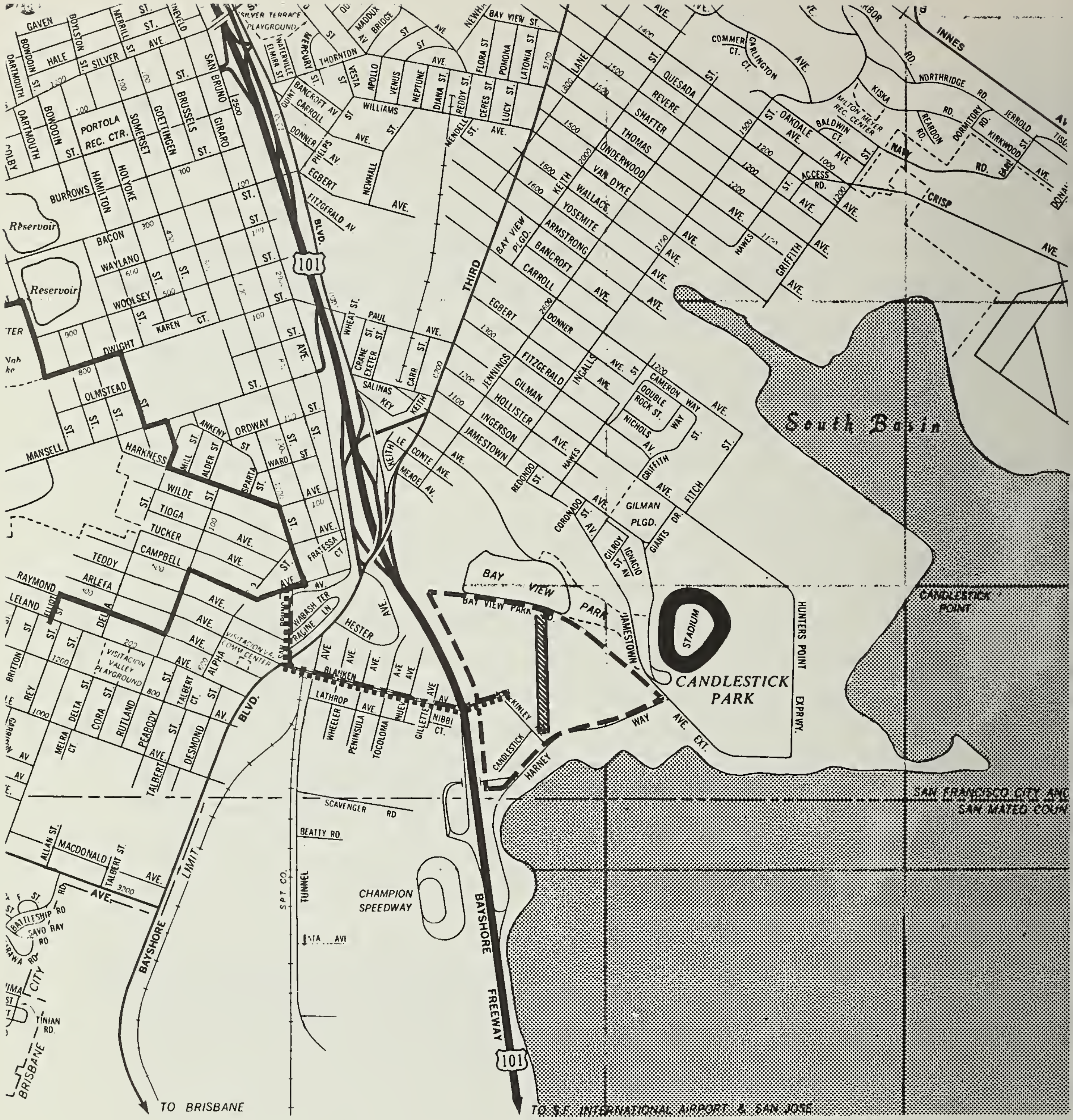
[1] James Cooney, San Francisco Water Department, telephone conversation May 1976.



┅┅┅┅┅ EXISTING 8" MAIN (PHASE 1, 1A LOWER, 2)

━ · ━ · PROPOSED 12" MAIN BY DEVELOPER (PHASE 1A UPPER, 3)

━━━━━ NEW 12" MAIN TO BE BUILT BY CITY

▨▨▨▨▨ EXISTING 4' X 6'6" SEWAGE TUNNEL

FIGURE 16. EXISTING/PROPOSED WATER MAINS AND SEWAGE TUNNEL

NORTH

exist from this point to the Blanken Avenue entrance of the site.

b. Dry and Wet Weather Sanitary flows.

No sewage is now generated on the site. When housing occupied it, sewage was transmitted through a 4 foot x 6 foot 6-inch sewage tunnel bisecting the property from Harney Way due north to the Southeast Water Pollution Control Plant. A chemically assisted primary treatment facility located at Jerrold and Phelps Streets.[1]

The drainage basin in which the proposed project lies has an area of about 82 acres (ten more than the actual project). Some of the original drainage structures still exist from the period when housing occupied the site. Additional draining facilities were installed when Harney Way was improved, and all surface drainage is now carried into the Bay south of Harney Way. Based on the City's design criteria, the drainage basin has a runoff of approximately 60 cubic feet per second.

11. Emergency Services

The nearest fire stations are Engine Station and Truck Company No. 42 on San Bruno Avenue near Silver Avenue, Engine Station No. 43 on Moscow Street, Engine Station and Truck Company No. 17 on Ingalls Street, and Engine Station No. 44 (Figure 13) on Girard Street.[2]

The project site lies in the Southeast Police District, with headquarters at Third Street and Twentieth Street.

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[1] Don Munakata, San Francisco Bureau of Sanitary Engineering, May 1976, telephone conversation.

[2] Gilbert Bendix, San Francisco Fire Department, March 1976, telephone conversation.

12. Visual Features of Site (Figure 17)

The general impression of the site to viewers from surrounding areas is one of a large, scarred land mass that has been altered over much of its surface area. The upper slopes of the property appear as a series of steep, red-brown, raw, cut slopes, with narrow benches at approximately 25-foot vertical intervals. The cap of the hill, beyond the project property line, is a part of Bayview Park and retains part of the hill's original contour and tree masses.

At the base of the hill the property levels into a series of stepped terraces, some of which are from quarry operations and others from flat building pads for wartime housing. Developable land lies on these flat terraces.

The groves of eucalyptus in Bayview Park and a scattering of small pines and cedars on the project site provide the only vegetation on the hill, and the sparse cover of shrubs and grasses does little to break the general, raw, graded character when viewing the project site from the south, west and east.

The project site is located adjacent to and overlooking San Francisco Bay and is a part of a land mass that visually dominates the Hunter's Point/Bayview/Visitacion Valley areas of San Francisco. The site could be viewed by some as having a visual landmark-like potential due to the size of Bayview Hill and its proximity to one of the two main entrances to the southern part of San Francisco.

The James Lick Freeway (Highway 101), the major route from Downtown San Francisco to the International Airport, borders the project site to the west and forms a physical barrier between the site and other low-rise residential, commercial,

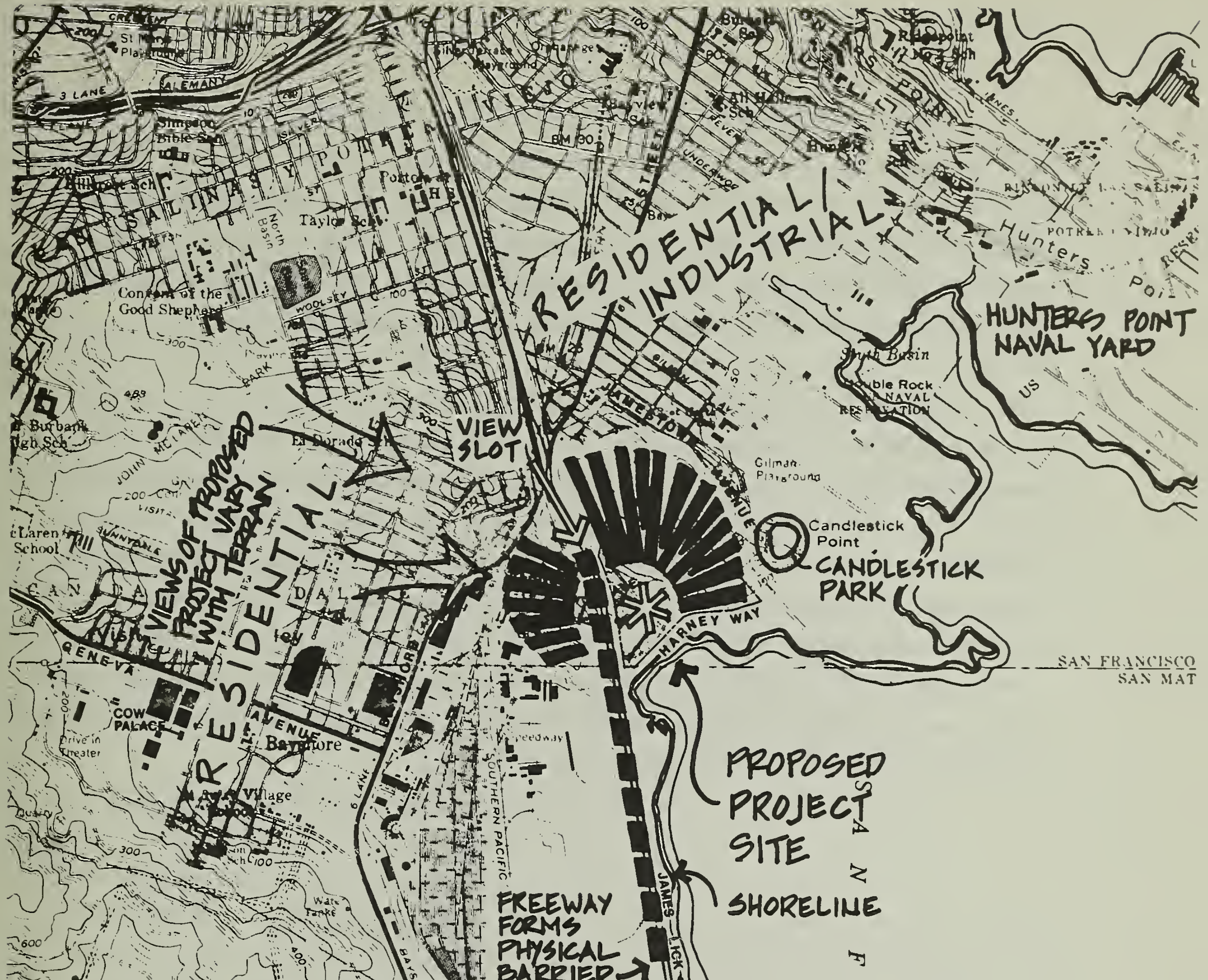

FIGURE 17. URBAN DESIGN MAP

and industrial developments on the western side. The highway, which begins to rise on a fill embankment at a three percent grade from a point 500 feet southwest of the project boundary, constitutes a visual barrier between the site and developments to the west, particularly to people at ground-level.

13. Neighborhood Concerns

In the Visitacion Valley, Little Hollywood, and South Bayshore neighborhoods there are more than fifty community organizations, agencies, and associations[1], such as the Bayview-Hunters Point Community Coordinating Council, the Little Hollywood Homeowners Association, the Visitacion Valley Improvement Association, the Visitacion Valley Merchants Association, and the All People's Coalition. At various times in Community meetings over the past five years, these organizations have expressed concern about the possible use of the project site.

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[1] Dukes-Dukes and Association, Bayview Hunters Point Neighborhood improvement plan.

IV. ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION

1. Topography

Implementation of the project would involve regrading some of the terraces on the site (shown in Figure 5, page 14) into a series of six pads (Figures 18 and 19). To develop this configuration, up to about 40 feet of material would be removed from the northern portion of the site in two major cuts. Fills up to about 30 feet thick would be constructed, primarily in the western and southern parts of the site. The cutting would entail removal of approximately 590,000 cubic yards, and about 505,000 cubic yards would be used as fill. Based on a 15 percent "shrink"[1] or loss factor applied to cutting and filling operations, the earthwork would leave a balanced condition on the site. If earth has to be exported from the site, it would be deposited at an approved location, which has yet to be determined.

2. Geology, Soils, and Seismicity

a. Cut Slope Stability

The preliminary grading scheme indicates a continuous cut slope up to 100 feet high. Although the slope could remain stable for many years, the likelihood of slope failures would be increased due to the steep cut, and the lack of intermediate benches could magnify the damage done by a possible slide.

b. Fill Embankments

The engineering Geologist states in Appendix A that, "No unusual

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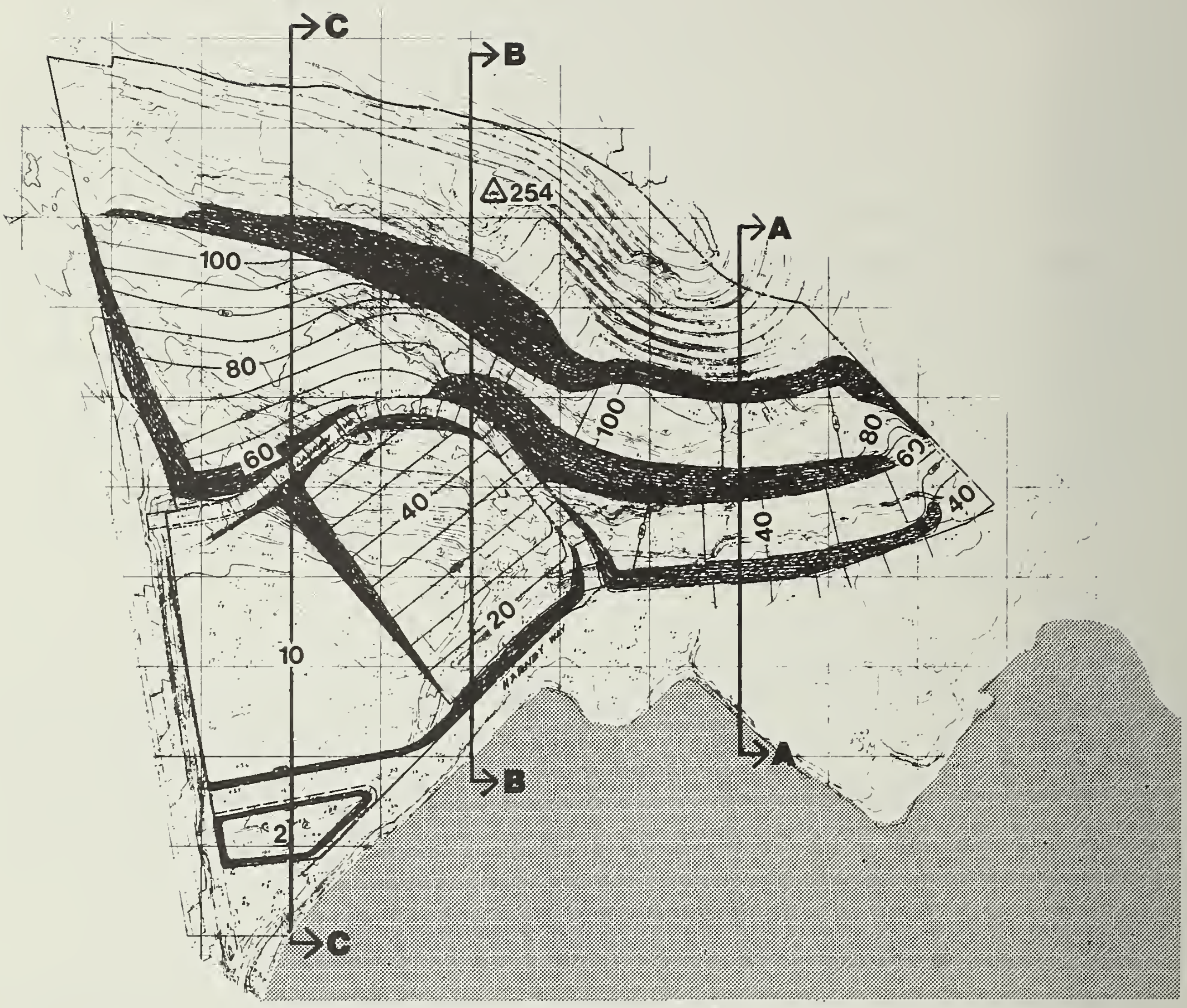
[1] A standard professional engineer's figure based on the type of material and location. Design of Small Dams, Department of Interior, Bureau of Reclamation, 1960, Chapter I, Section 27, page 14.

As the site would be watered during excavation, a negligible amount of soil would contribute to air pollution.



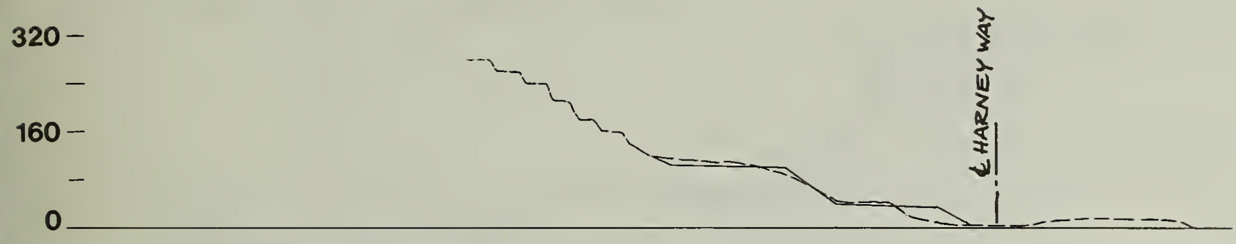
00 ELEVATION ABOVE MEAN SEA LEVEL

▨ MAJOR NEW SLOPES

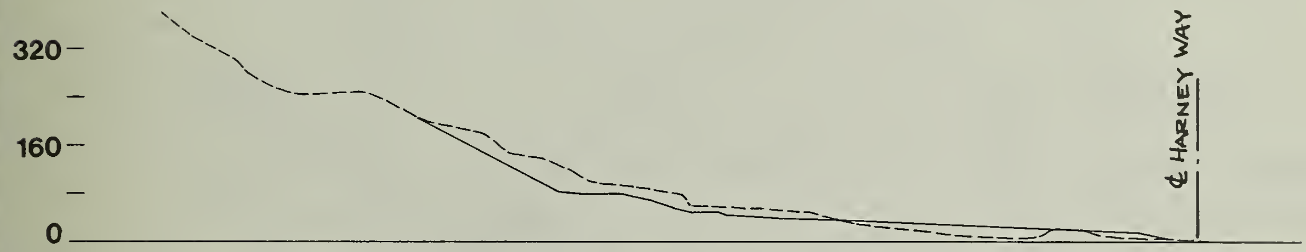
SEE FIGURE 19 FOR SECTIONS

FIGURE 18. PROPOSED GRADING MAP

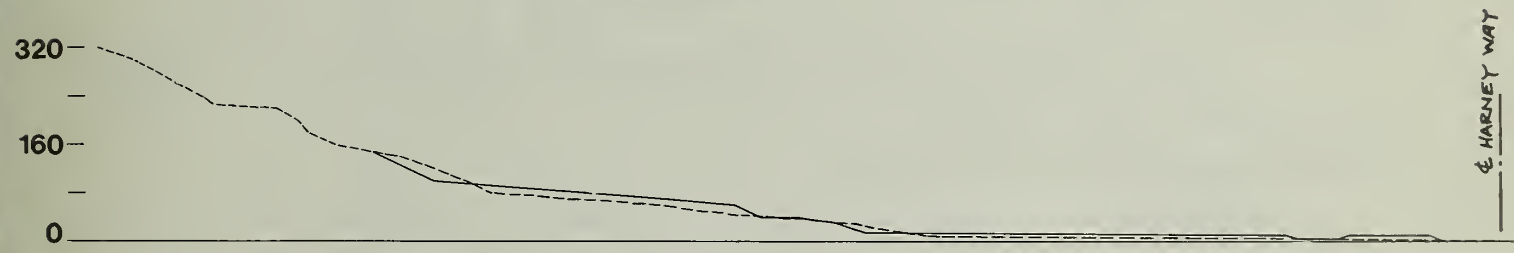
NORTH



SECTION A-A



SECTION B-B



SECTION C-C

------- EXISTING SLOPE

——— PROPOSED GRADING

SEE FIGURE 18 FOR SECTION LOCATIONS

FIGURE 19 . GRADING CROSS SECTIONS LOOKING EAST problems associated with the planned fills are envisioned, provided that the fill sites are properly prepared, that fills are adequately structured with the underlying slopes, and that adequate subdrainage is incorporated in the design, particularly in the western part of the site, where a fill would be constructed over the existing ravines."

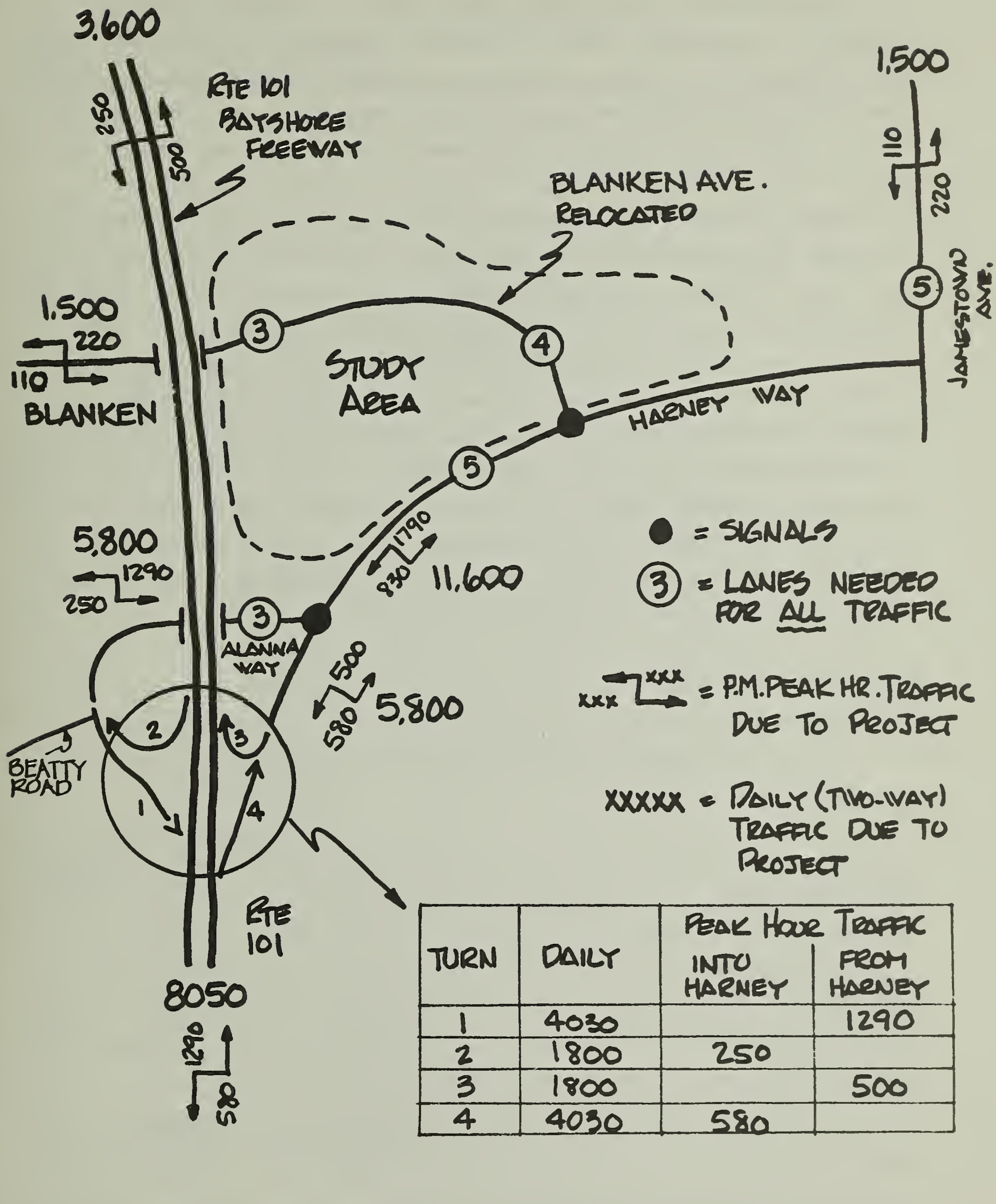
c. Foundation Considerations

The Bay Mud deposits in the southern part of the site have completely consolidated under the weight of the fill that has been over them for 30 years. Additional consolidation is expected under the planned 9 to 10 feet of new fill; however, the structures planned on this fill are not expected to experience uneven settling. Formal foundation investigations and engineering analysis would be required by the developer prior to construction. No structures are planned to be built entirely on areas subject to liquefaction and subsidence hazards identified in the Blume Report. A further discussion of impacts can be found in Appendix A, which contains a preliminary geological engineering study made in 1969 and an updated review of the proposed project.

3. Traffic, Transportation, Circulation, and Parking

a. Impact on Street System

As detailed in column 1A of Table 4, page 54,the proposed project is estimated to generate 15,000 inbound and outbound vehicles per day (trip ends). During the hour of most travel, 5:00 to 6:00 p.m., about 1,100 vehicles would arrive (primarily for restaurant, hotel, and convention uses) and 2,250 would leave (principally office workers) (Table 5, page 56). Of those leaving in the peak hour (Figure 20), about 1,300 would travel the freeway southbound, 1,800 Harney Way westbound, 200 Blanken Avenue westbound, and 200 Jamestown Avenue westbound. The route of travel was predicted from travel time and distance measurements along three access routes: the freeway interchange (including



TURN	DAILY	PEAK HOUR TRAFFIC INTO HARNEY	PEAK HOUR TRAFFIC FROM HARNEY
1	4030		1290
2	1800	250	
3	1800		500
4	4030	580	

FIGURE 20. TRAFFIC CIRCULATION IMPACTS MAP

NORTH

Harney and Alanna Ways) and Jamestown and Blanken Avenues. Earlier research has shown that once people are familiar with the alternatives, they will choose travel routes according to the "Net Load Distribution Curves" shown in Appendix E. The travel time and distance measurements were applied to these curves to predict the travel routes of project generated vehicles. These figures were also compared to data generated for two other projects in the area: the staff report for the San Bruno Mountain Project, prepared by the San Mateo Planning Department in June 1975, and the Brisbane Marina Draft EIR, prepared for the Brisbane Planning Department by ESA in 1975. Of the 200 vehicles estimated to use Blanken Avenue from the project during the afternoon peak hour, about 100 are considered destined to the Leland Avenue commerical area or to homes in the general vicinity. (Note: the same vehicles may be counted more than once as they travel from Harney Way to the freeway, i.e., vehicles are counted for each street; thus the sum of the street counts exceeds the total trip generation.)

TABLE 4

Executive Park Trip Generation

	Trip Ends		
		P.M. Peak Hour	
Land Use Type	Daily Two-Way	Out	In
Office	9,500	1,380	170
Hotel	1,100	30	30
Restaurant/Convention	1,280	640	640
Restaurant	720	40	70
Shop	2,460	150	150
Total	15,100	2,240	1,060

Source: California Department of Transportation. Based on trip-generation rates in ten Progress reports on trip ends generation research counts, 1965 to 1975. Prepared in cooperation with the U.S. Department of Transportation, Federal Highway Administration, July 1975. Note totals do not add exactly due to rounding.

The proposed project traffic would bring the freeway from its current southbound volume of 70 percent of capacity to about 85 percent of capacity in the afternoon peak hour (1,300 + 5,600 = 6,900 = 85% of 8,000 capacity). Since northbound, morning peak-hour freeway volumes are higher than southbound volumes in the evening, the proposed project would bring the northbound freeway to near capacity (about 7,500 vehicles per hours) in the morning. Traffic would move approximately 5 to 10 miles per hour below the speed limit. Harney Way, with three lanes operating westbound and two eastbound, would be at about 75 percent capacity for afternoon traffic (1,790 = 75% of 2,400 capacity) and 77 percent capacity for morning traffic (1,200 = 76% of 1,600 capacity). Blanken Avenue's two westbound lanes would be at about 20 percent of capacity (200 = 20% of 1,100 capacity). In the morning peak hour, the single eastbound lane would be at about 30 percent of capacity (200 vehicles = 29% of 750 capacity).

Blanken Avenue would remain a three-lane street within the proposed project area as far east of the freeway as the first major parking area entrance. To accommodate the vehicles entering parking access/egress from Harney Way, Blanken would be four lanes wide from the first major parking area to Harney way with left-turn lanes (which would be a fifth lane) added at driveways and the Harney Way intersection. Jamestown Avenue would have the same volume of traffic north- and southbound as Blanken would have west- and eastbound.

Traffic on Alanna Way would increase to 81 percent of capacity westbound during the morning peak hour (1,300 vehicles = 81% of

TABLE 5

Existing and Projected Traffic

Location	Average Speed[1]	Volume[3] Existing 2-Way Daily	Volume[3] Existing P.M. Peak Hour Southbound (5:00-6:00)	Volume[3] Due to Project 2-Way Daily[4]	Volume[3] Due to Project P.M. Peak Hour In	Volume[3] Due to Project P.M. Peak Hour Out
Route 101 north	50	123,000	NA	3,600	250	500
Route 101 south	55	123,000	5,600	8,000	600	1,300
Harney Way (west of Blanken)	30	3,000[2]	NA	11,600	850	1,800
Blanken (west of 101)	25	2,000[2]	NA	1,500	100	200
Jamestown	25	2,000	NA	1,500	100	200

Sources: California Department of Transportation, Traffic volumes on California state highways, 1974; San Francisco Traffic Department.

[1] Estimated speed by Don Goodrich, traffic engineering.

[2] Estimated average of all days.

[3] Estimated 5 percent of daily volume is trucks.

[4] Vehicles included in traffic count may pass one or more routes, e.g., some of the 8,000 vehicles southbound on 101 may be part of the 11,600 vehicles projected on Harney Way.

NA = Not available. SB = Southbound. NB = Northbound.

1,600 capacity) and increase to 31 percent of capacity eastbound during the evening peak hour (250 vehicles = 31% of 800 capacity). An exception would occur on two or three days per year when major events at Candlestick Park could be expected to overlap with afternoon commute traffic generated from the proposed project, resulting in severe congestion. If the proposed project were located in central San Francisco, some 40 percent of the employees could be expected to arrive by transit. Since most of the proposed project's parking and most of its traffic are generated by the office facilities, less parking would be needed with a downtown site since there are more transit systems and all-day parking is limited. A greater percentage of the employees at the proposed project than workers at downtown San Francisco are expected to drive due to limited transit, adequate parking, convenient highway access, and the distance most employees would live from the proposed project (more than a radius of 15 minutes walking).

b. Parking

Four hundred to 700 unmarked spaces would be lost for major Candlestick Park events and the on-street parking demand in the Little Hollywood residential area could increase if appropriate mitigation measures were not taken. As shown in Table 6, the proposed project would generate demand for 4,120 parking spaces, about 200 more than the 3,890 proposed on the project site. If discourged from parking in Little Hollywood, the 200 vehicles in excess of available spaces would probably park in the Candlestick lots or adjacent to the proposed project site on Jamestown Avenue.

The parking arrangements for the proposed project are inconsistent with the following recommended policies of joint study of the San Francisco Departments of Public Works and City Planning.[1]

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[1] Parking in San Francisco, A Joint Report prepared by The Department of Public Works and The Department of City Planning, San Francisco, December 1975. The polices would be presented to the City Planning Commission and recommended for amendment to the Transportation Element of the San Francisco Comprehensive Plan.

TABLE 6

Projected Parking Spaces

	Actual Demand					Required by City Code		
Land Use	1,000 sq. ft.	Spaces per 1,000 sq. ft.	Product	Shared Percent	Projected Parking Spaces	Spaces per 1,000 sq. ft.	Product	Required Parking Spaces
Office	863.7	3.3	2,850	--	2,850	2.0	1,727	1,727
Hotel	110.0	2.5	275	--	275	1 (per 8 rooms)	34	34
Restaurant/ Convention	63.9	15.0	958	30[1]	670	5.0	319	237
Restaurant	14.4	8.0	115	30	80	5.0	72	50
Shop	61.4	5.0	307	20	245	2.0[3]	206	165
Total			4,500		4,120[2]		2,360	2,200

Source: Eno Foundation for Transportation, Zoning, parking and traffic, Saugatuck, Conn., 1972.

[1] Assumes lots are interconnected between Phase 1 office and Phase 2 convention center.

[2] 3,890 spaces are indicated on the plan. The restaurant has 98 of these and the hotel and restaurant/convention area 505. The rest are at office and shopping sites.

[3] Up to 20,000 sq. ft.; over that number the requirement shifts to 4 per 1,000 sq. ft.

Objective 2: Insure that the provision of a new or enlarged parking facilities does not adversely effect the livability and desireability of the city.

Objective 2, Policy 2: Approve new or enlarged parking facilities only if they conform to the Master Plan Policies or established criteria.

c. Transit

The No. 29 Muni bus line, currently estimated to be carrying ten peak-period riders at its terminus near the site, is projected to carry 200 additional riders for each peak period (about 600 additional riders during a 24-hour period). The number of projected riders is about equal to the capacity of the existing service at the eastern terminus and would cause an excess over available capacity throughout the remainder of the line.

d. Neighborhood Concerns

At various meetings with the proposed project developers (see Section IV., 15) residents of Little Hollywood and Visitacion Valley had specific concerns related to traffic, circulation, and transportation aspects of the proposed project:

- Traffic generated by or related to the proposed project should not pass on Blanken Avenue.
- The proposed project should provide adequate parking facilities, and parking by proposed project employees and users on residential streets should be prohibited.
- Autos related to events at Candlestick Park should not be permitted to park on the proposed project site.
- All traffic related to proposed project construction should be prohibited on Blanken Avenue.
- All construction of utilities and connections off site should be minimized so as not to disrupt residential areas.
- Consideration should be given in proposed project design to pedestrian and bicycle access from Little Hollywood and Visitacion Valley via Blanken Avenue to the proposed Shoreline Park and Bayview Park.

e. Construction

Traffic impacts associated with construction of the proposed project would be limited to the use of the James Lick freeway off-ramps that lead to Harney and Alanna Ways. No construction traffic would be permitted on Blanken Avenue, with the exception of two to three months, during which a new water line and other utilities would be in one lane of Blanken Avenue from the proposed project site to Old Bayshore Boulevard and in San Bruno Avenue to the intersection of Campbell and San Bruno Avenue (Figure 16, page 44).

4. Air Quality

The short-term impact of the proposed project on air quality would be caused by increased dust in the air during construction and exhaust emissions from construction vehicles. The windy nature of the site would aggravate windblown dust problems.

Emissions from stationary sources within the proposed project site would include combustion products of natural gas. Energy would be supplied by electricity and natural gas, neither of which causes local air pollution problems. Natural gas combustion is a relatively clean process,[1] and electricity for this area is generated elsewhere, either hydroelectrically or by burning natural gas or fuel oil. Recent shortages of natural gas may force industry to use fuel oil in the future, which contain more sulfur and would increase emissions of sulfur dioxide in the Bay Area. Pacific Gas and Electric Company has stated that in the future it may have to increase its use of low-sulfur fuel oil to generate electricity. If this should happen, increases in sulfur dioxide pollution could be expected, part of which would be due to the energy demands of the project.

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[1] U.S. Environmental Protection Agency, AP-42, Compilation of air pollutant emission factors, 2nd Edition, Supplement No. 3, July 1974.

The effects of project traffic on air quality have been analyzed at three scales.

a. Local Scale

The primary pollution problem on the local (traffic-corridor) scale is carbon monoxide (see Appendix D). The area of greatest traffic, both now and in the future, is the James Lick Freeway, directly west of the project site (see Figure 2, page 3).

Carbon monoxide concentrations immediately downwind of the freeway (within 20 feet) were selected as representing the "worst case" condition. Under assumed adverse meterological conditions (low winds, high atmospheric stability), carbon monoxide levels were predicted with proposed project and current conditions. Meteorological conditions assumed are a wind at a 22-1/2 degree angle to the roadway with a steady speed of one meter per second (2 miles per hour) for the one-hour calculation and two meters per second (4 miles per hour) for the eight-hour calculation.[1] The results are shown below:

TABLE 7

Local Carbon Monoxide Concentrations
(parts per million)

	1-Hour Average	8-Hour Average
Present (1975)	15.0	6.0
With Project (1981)	8.0	2.5
No Project (1981)	5.5	2.0
National Standard	35.0	9.0

---

[1] Bay Area Air Pollution Control District, Guidelines for air quality impact analysis of projects, Information Bulletin, 1975.

Carbon monoxide concentrations would decrease whether or not the project is built, due to the anticipated effects of emission controls. Project-generated traffic would cause increases in carbon monoxide concentrations.

All predicted concentrations, present or future, are below the national ambient air quality standards of 35 and 9 parts per million for the one- and eight-hour standards, respectively.

b. Areawide Scale

The effect of project and non-project emissions on air quality is quantified by considering all emission sources within a one-kilometer square (.386 square mile) centered on the project. Model input is the average daily emissions from the project. Sources considered included U.S. Highway 101, Blanken Avenue, Harney Way, Jamestown Avenue, and the project parking areas.

The results of the statistical model predicting concentration and yields estimates of the annual maximum concentration of carbon monoxide at various averaging times are given below.

TABLE 8

Areawide Carbon Monoxide Levels
(parts per million)

	1-Hour Average	8-Hour Average
Present (1975)	2.6	1.6
With project (1981)	2.1	1.3
No project (1981)	0.9	0.5

The predicted present and future levels are below the national standards. Levels would decrease whether the proposed project is built or not, but the amount of change with the proposed project is smaller.

c. Regional Scale

The regional impacts of the proposed project are measured by estimating pollutant levels 10 kilometers downwind with a dispersion model (see Appendix C). Project emissions are considered to be released from a point source centered at the site. The disperson model yields estimates of the project's impact on air quality after pollutants are transported to the East Bay.

The resulting concentrations of various pollutants for the proposed project are shown below:

TABLE 9

Regional Concentrations[1] of Pollutants

Pollutant	Ambient Air Quality Std.	Proposed Project
Carbon monoxide	40,000 (1 hour) 10,000 (8 hours)	3.6 2.7
Hydrocarbons	160	0.85
Nitrogen oxides	500	0.70
Sulfur oxides	100	0.02

d. Effects on Air Quality Planning

It is likely that the Air Quality Maintenance Plan (AQMP) will contain provisions for land use planning and transportation controls. Measures may control, limit, or restrict location of development or require development of alternative transportation systems. Because the provisions of the Plan are uncertain, the effect of the proposed project on the AQMP or the effect of the AQMP on the proposed project cannot be ascertained.

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[1] Calculations were carried out to two significant figures for comparison only. Accuracy to two significant figures is not implied.

5. Climate and Comfort

Any development on the site would affect human comfort in two ways. First, more people would be exposed to the climate. Second, the grading plan, structures, and other improvements would affect wind speeds, wind directions, and sunshine patterns on the site. Appendix B contains a microclimate impact analysis for the proposed project. Results of the wind tunnel study indicate that the proposed project would reduce winds slightly in the open areas of the site due to the added roughness and drag exerted on the wind by structures and topographic changes. Close to buildings, however, wind exposure would vary from very sheltered to very exposed.

Each of the four areas comprising the project (Figure 3, page 7) was analyzed separately. Areas 1 and 2 were found to be sheltered and would have low discomfort frequencies,[1] primarily because they contain low-rise complexes (up to 40 feet) and are at a low elevation. Area 1A is on an exposed plateau and the building configuration does little to reduce winds or discomfort. Area 3 was found to have the highest winds and the greatest potential for discomfort.

The high-rise towers accelerate wind at ground level of a wind speed index from approximately 12 to 74 (see Appendix B). Coupled with large shadow areas caused by these structures, this would cause frequent, cool and windy conditions. Plaza and courtyard areas intended for outdoor activities would be subject to shadows cast by the buildings and site features. Conditions incompatible with the intended uses could result, especially where shadowing is combined with wind exposure. Shadowing impacts would be particularly severe in the following areas (Figure 21, pages 65 to 70): The Courtyard in Area 3 would be in shade in the morning (50 percent of the time)(Figure 21D).

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[1] Areas with no shade and low wind speed index 0-20, see Appendix B.

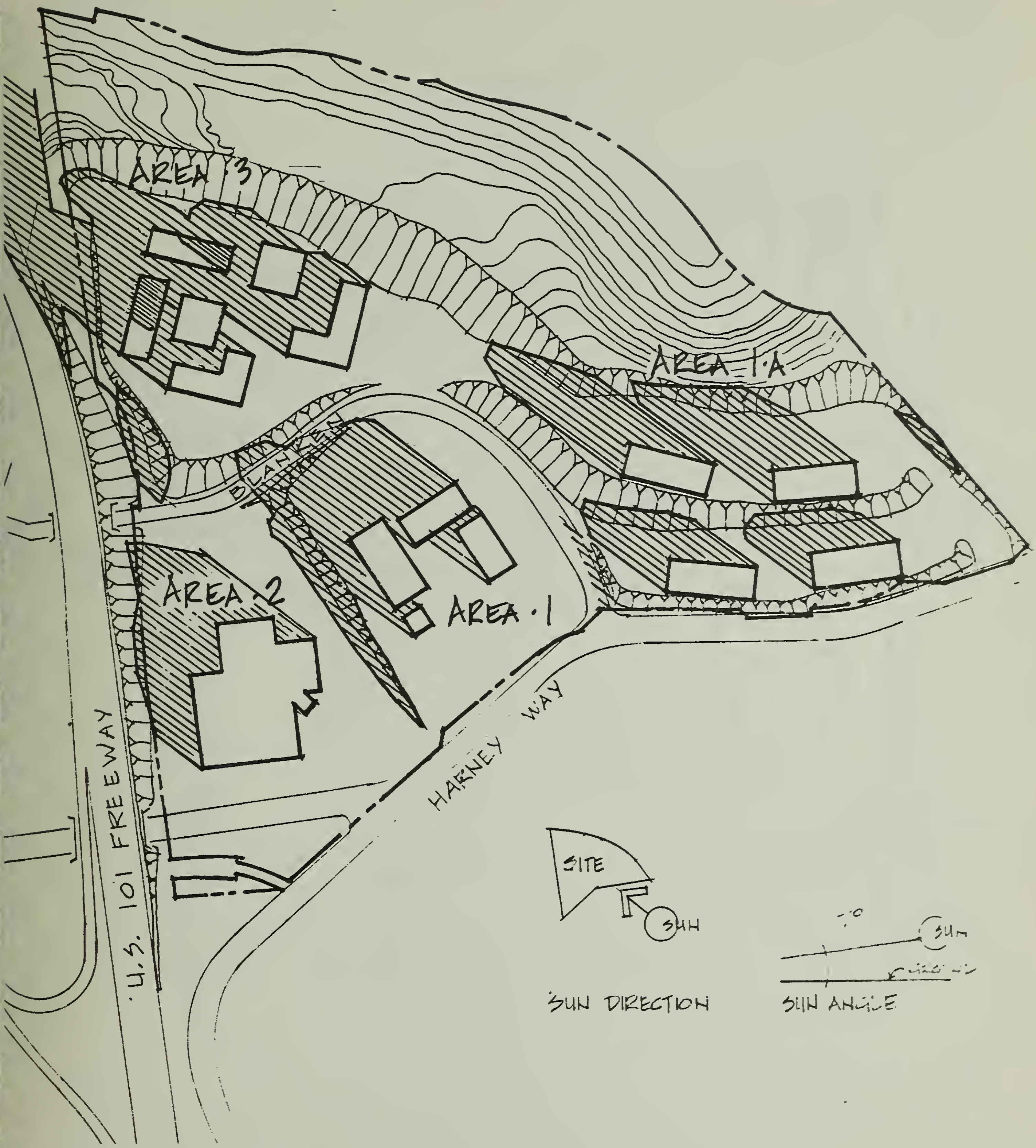

FIGURE 21A. SHADOW DIAGRAM OF PROPOSED BUILDINGS, WINTER 8 A.M.

NORTH

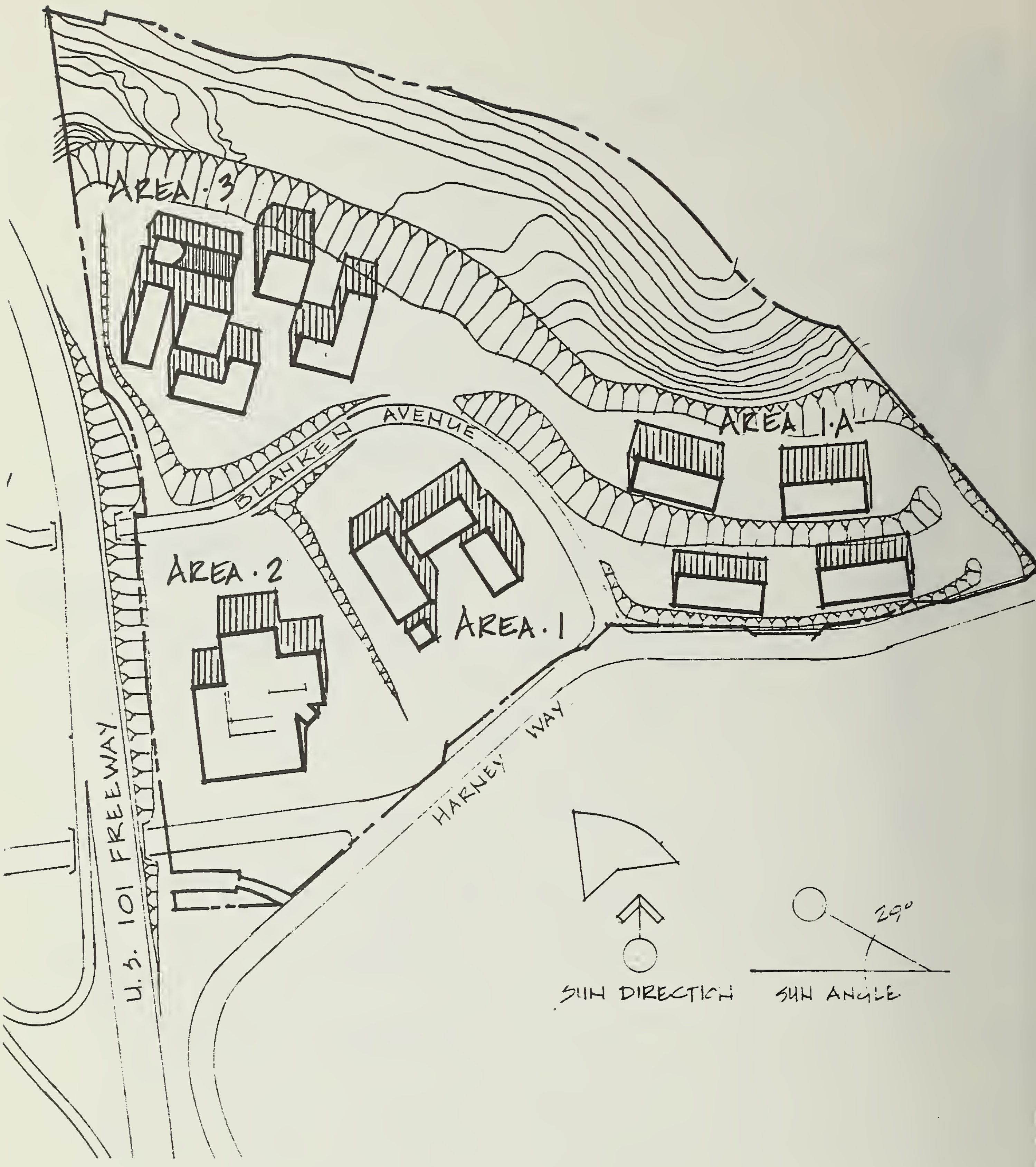

FIGURE 21B. SHADOW DIAGRAM OF PROPOSED BUILDINGS, WINTER NOON

NORT

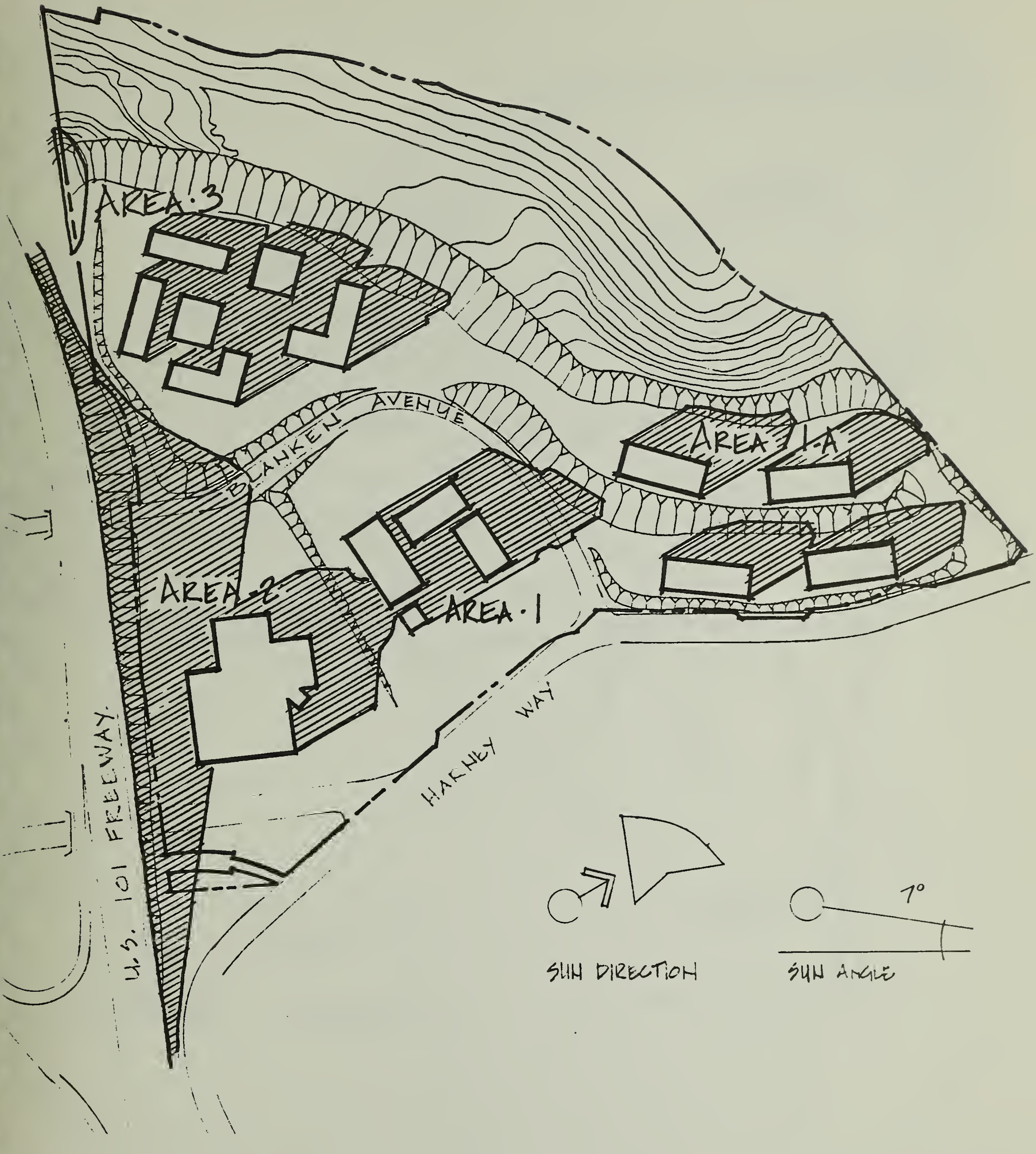

FIGURE 21C. SHADOW DIAGRAM OF PROPOSED BUILDINGS, WINTER 4 P.M.

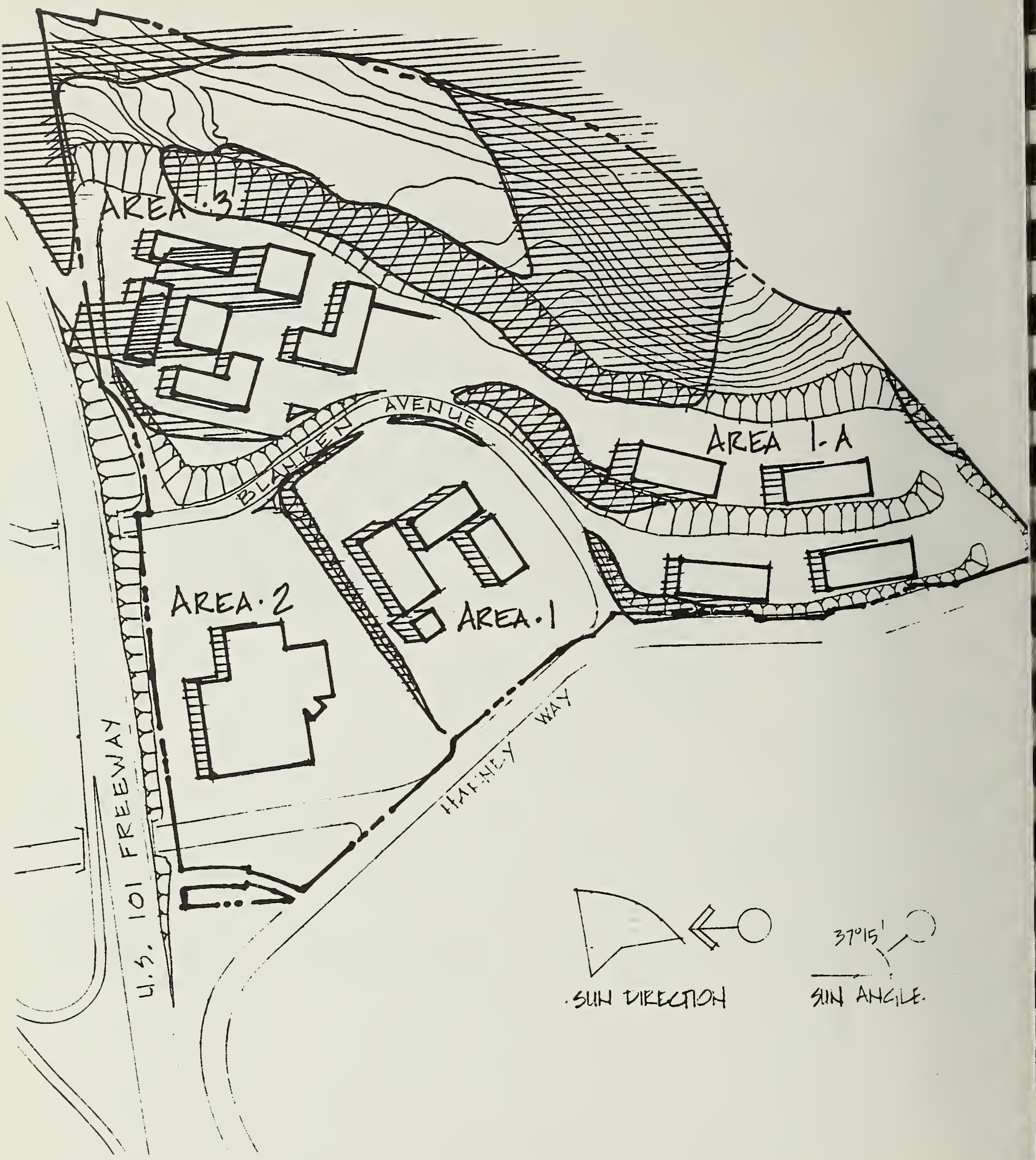

FIGURE 21D. SHADOW DIAGRAM OF PROPOSED BUILDINGS, SUMMER 8 A.M.

NORT

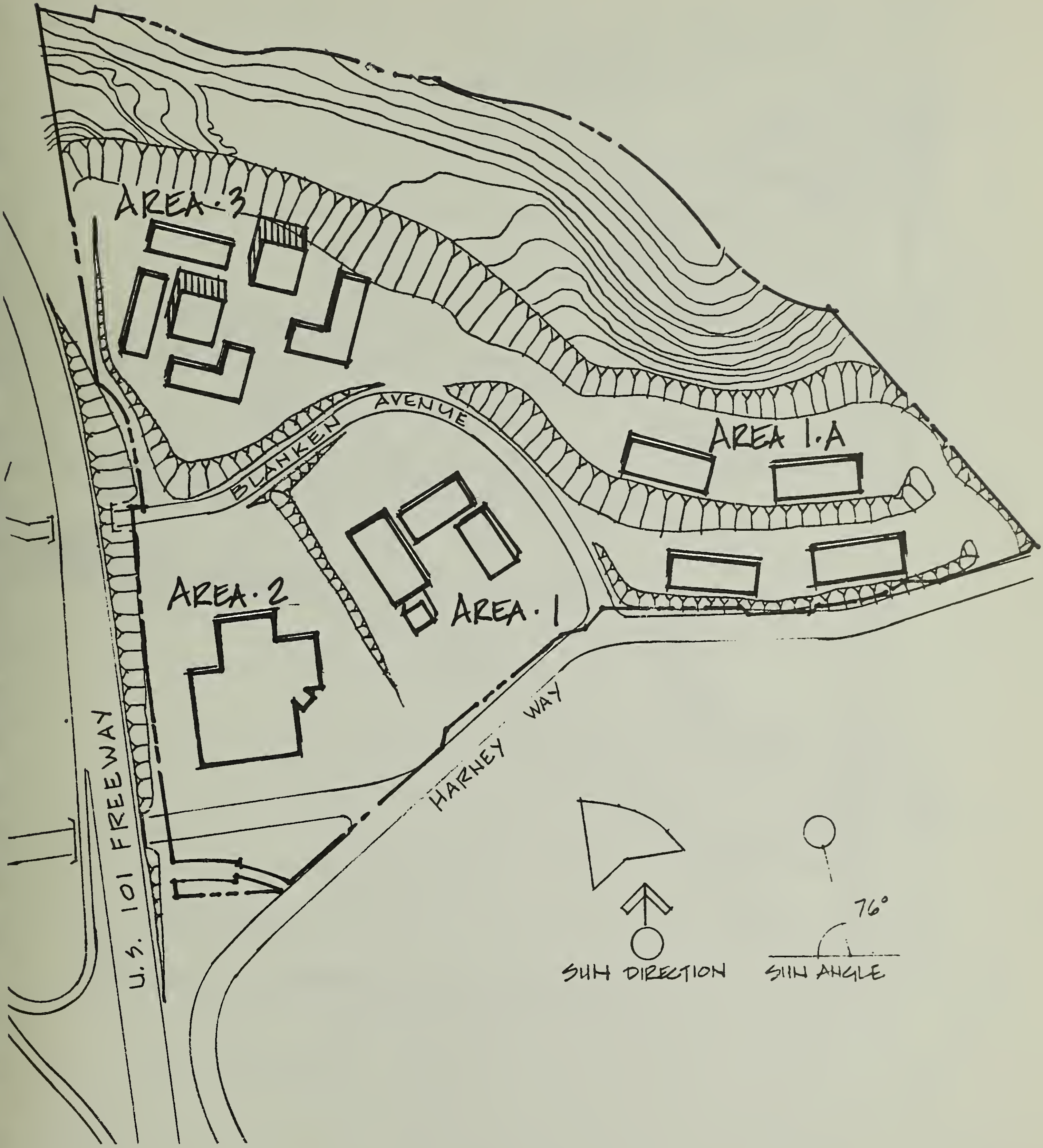

FIGURE 21E. SHADOW DIAGRAM OF PROPOSED BUILDINGS, SUMMER NOON

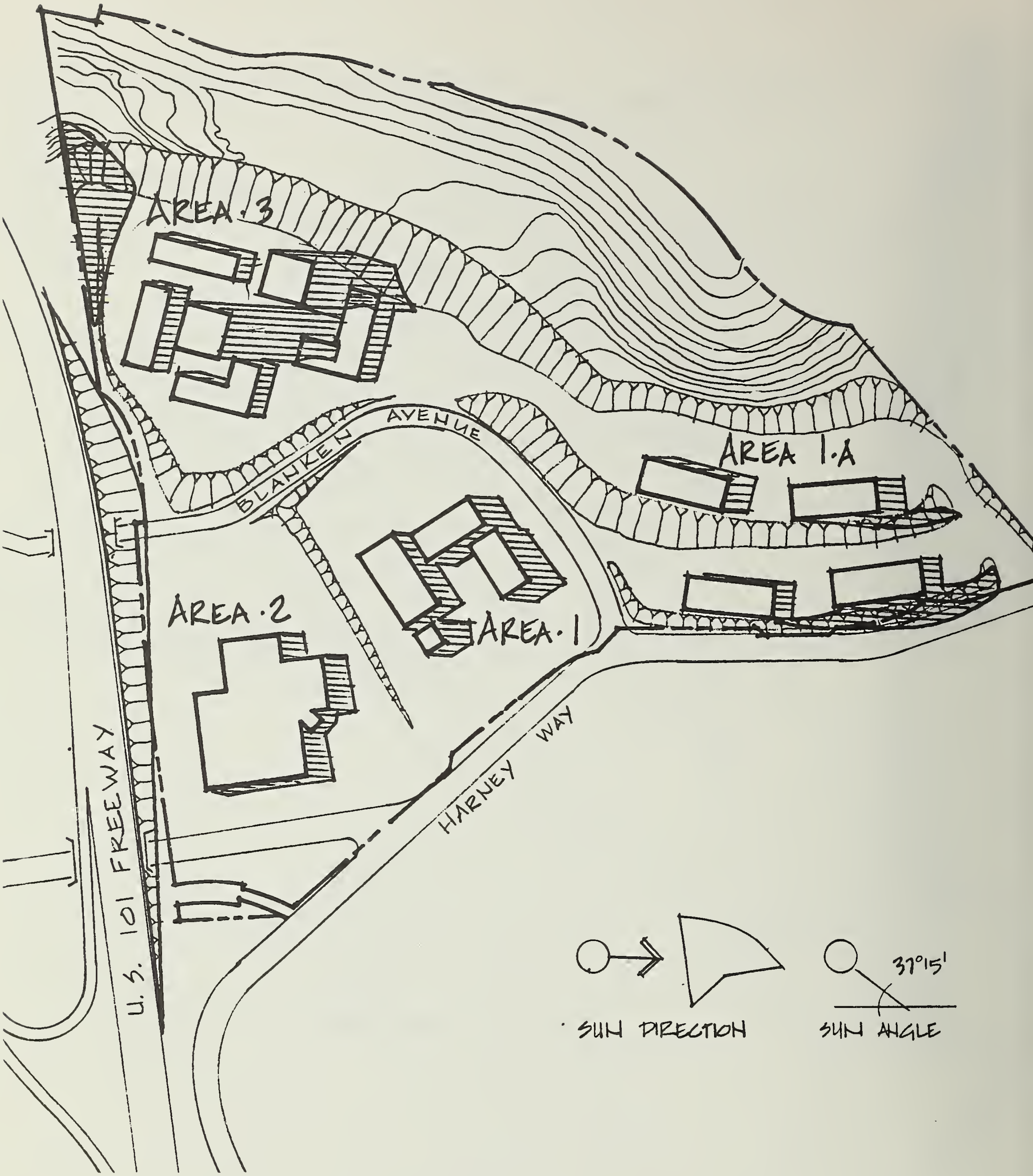

FIGURE 21F. SHADOW DIAGRAM OF PROPOSED BUILDINGS, SUMMER 4 P.M.

and late afternoon (85 percent of the time) (Figure 21F) all summer and would be in the shade 60 to 100 percent of the time (Figures 21A, B, C) in the winter months. North and west entry areas to all buildings would be in the shade during most of the winter months (Figures 21A, B, C). Courtyards in Area 1 would be frequently shaded by buildings in winter (Figures 21A, B, C) and 10 to 50 percent of the time in the summer (Figures 21D, E, F).

6. Vegetation and Wildlife

About a thousand native trees and shrubs would be planted on the site, primarily on the undeveloped open space on the upper slopes of Bayview Hill (approximately 30 acres). This increase in vegetation would add to the wildlife shelter on the site and would lessen erosion potential. The landscaping of the steeper portions of the site would also have a visual impact.

Irrigation of the managed landscaped areas would increase the demand for water consumption by some 70,000 gallons per day (see Section IV., 11, page 74).

The landscaping and added planting on the site is consistent with the following policies, objectives, and recommendations of the South Bayshore Development Plan (p. 7), the Urban Design Element (pp. 36, 130), and the Conservation Element (p. 74) of the San Francisco Comprehensive Plan:

--emphasis on the hills with hilltops kept as open landscaped view points;

--protect and promote large-scale landscaping and open space that define districts and topography;

--install, promote, and maintain landscaping in public and private areas.

7. Land Use

An application for rezoning the site from R-1 (One Family Residential District) and M-1 (Light Industrial District) to C-2 (Community Business District) was submitted to the City Planning Department in February 1976.

The site is classified by the City Planning Code as an "A" district, which means that all structures must be 40 feet in height or lower. In order for the proposed project to be implemented a reclassification of the height limit must be given. No height reclassification has yet been issued by the City for any district since enactment of the Height and Bulk Ordinance, August 18, 1972. An application was submitted in June 1976 to the City for height reclassification of Area 3 (Figure 3, page 7) up to 200 feet and bulk classification "I."[1]

If the height reclassification and rezoning were permitted, the land use of the site would change to office, restaurant, hotel, and convention activity.

Study recommends development of "upwards of 700 units on 47 acres of land, 5 acres of shopping, 5 acres for an elementary school and 2.5 acres for recreation" (the proposed project site is 71 acres).[2]

8. Archaeology

The archaeologist's report (Appendix F) indicates that implementation of the proposed project is not expected to have an impact on archaeological remains.

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[1] "I" classification applies to buildings which are over 150 feet in height. The maximum bulk dimensions in this district symbol classification are 170 feet in length and 200 feet diagonally. San Francisco City Planning Code, Chapter II, Article 2.5, Section 270, Table 7, pages 84 and 85.

[2] The South Bayshore Study, adopted by Resolution 6745 of the Planning Commission, February 19, 1970, page 80.

9. Demography

The economic study for the proposed project (Appendix I) estimates that with full implementation of the proposed project, about 4,900 permanent jobs would be created. Nearly 3,500 of these positions would be clerical and service jobs. Based on the 1970 census, over 25 percent of the residents living in the adjacent neighborhoods (Table 3, page 38) were employed in the clerical and service job categories (a greater percentage than any other occupation category). The proposed project is not expected to affect the demographic makeup of the nearby communities (i.e., it is unlikely that prospective project employees would move to the local neighborhoods, and people living in the nearby community who would work at the proposed project would probably not move away from the area).

The proposed project is designed to attract users from downtown San Francisco, from the Midpeninsula, and from elsewhere outside the City. It is not expected that the user population would affect the demographic characteristics of the City or the region.

10. Noise

The intended land uses of the proposed project are in the categories of Office Buildings, (Personal, Business and Professional Services), transient Lodging (Hotels), and Commercial (Retail and Restaurants) as set forth in the Transportation Noise Section of the Environmental Protection Element of the San Francisco Comprehensive Plan. Figure 15, page 42 indicates that the office buildings and commerical land uses could be built without noise insulation requirements in areas with sound levels less than 70 dB(A) (in Community Noise Equivalent Levels, as discussed in Appendix G). Approximately 58 percent of the proposed project site experiences less than CNEL 70 dB(A) (Figure 14, page 41). According to the Land Use Compatibility Chart (page 42) between 70 and 75 dB(A) is conditionally acceptable for the above uses, provided that a detailed noise analysis is conducted and special noise insulation provisions are incorporated into the proposed project design. Between the 75 dB(A) and 80 dB(A) contours, new construction or development should be discouraged. If development does proceed, noise reduction requirements must be made and special noise insulation features must be included in the design.

Any land used for transient lodging, such as hotels or motels, must have noise insulation provisions between 60 and 75 dB(A). The hotel planned for the site (in Area 2) would be between the 70 dB(A) and 80 dB(A) contours and would require a detailed analysis of the noise reduction requirements and special noise insulation provisions in the proposed project design.

The proposed project may be inconsistent with the following objective and policy of the Transportation Noise Section of the Environmental Protection Element of San Francisco Comprehensive Plan (page 15):

- Objective 3: Promote land uses that are compatible with transportation noise levels.
- Policy 1: Discourage new uses in areas in which the noise level exceeds the noise compatibility guidelines for that use.

11. Public Utilites and Energy Consumption

Impacts of the proposed project for utilities and services are based on the Utilities Report, Appendix H.

a. Water

The proposed project would consume an average of 283,000 gallon per day (peak consumption 330,000 gallons per day) to serve users, facilities, and irrigation[1]. The developer of the proposed project would construct a 12-inch water line replacing the existing 8-inch line in Blanken Avenue to the connection point of a new 12-inch City line at Campbell Avenue and Goettingen Street (Figure 16, page 44).

Preliminary discussions with the San Francisco Water Department indicate that an adequate supply of water would exist if the new 12-inch City line were completed before the construction of Area 3 and the upper portion of Area 1A[2]. (No schedule has been set for construction of the line from the Sunset Reservoir).

The proposed project would have a cumulative effect, together with other projects in the area, on total water usage in the region (See Section IV, 16, page 105). This could increase the need for expanded storage and distribution facilities.

b. Electricity

The anticipated electrical demand for all uses in the proposed project, based on project design criteria in accordance with applicable codes and facility requirements, is shown below:

Connected load, kilowatts	18,000[3]
Average kilowatt-hours used per month	6,720,000
Average kilowatt-hours used per month per square foot	6.0

---

[1] Water consumption estimates are based on 36 gallons per day per capita for employees, 10 gallons per day per capita for patrons, 2,470 gallons per day per acre for irrigation, and 50 gallons per day per hotel unit. Residential consumption is estimated at 80 gallons per capita per day.

[2] James Cooney, San Francisco Water Department, telephone conversation, May 18, 1976.

[3] All calculations are based on project area and design data tables provided by the Northern California Chapter of the American Society of Heating, Refrigerating, and Air Conditioning Engineers.

Daily and annual load distributions for electrical consumption are shown in Figures 22 and 23; the total variation from maximum to minimum consumption is 40 percent with winter consumption being the lowest.[1] The buildings would be air conditioned and would be arranged on an economizer system to reduce electrical consumption.

c. Natural gas and fuel oil

The proposed complex would use natural gas for heat (including water) and restaurant cooking.[2] Estimated proposed project fuel requirements for the operation of the entire development are shown below:

Average consumption of fossil fuel in British Thermal Units per square foot of interior floor space per day[3]	77
Maximum natural gas consumption, cubic feet per hour	27,700
Total connected load of natural gas, cubic feet per hour	28,300

---

[1] Minimum daily electrical consumption occurs on the average around 7 a.m. prior to occupancy of the office buildings and after janitorial work is complete. Maximum daily electrical consumption occurs around 8:30 p.m. as all lights are on after dark for janitorial employees.

The yearly electrical consumption increases abruptly in early March when air-conditioning is turned on and again in May when the temperature reaches the highest levels.

[2] A ruling by the California Public Utilities Commission (PUC) (Decision No. 85189, December 2, 1975) may affect natural gas users consuming more than 50,000 cubic feet per day. No increase in gas deliveries to such customers is to be made, and no new gas-burning equipment is to be connected where fuel requirements can be met with an alternative fuel. The proposed project developer is studying the possibilities of using alternative fuel sources such as solar energy and fuel oil. The Pacific Gas and Electric Company is reviewing the PUC ruling and its ramifications for the energy needs of the proposed project.

[3] See Footnote 2, preceding page.

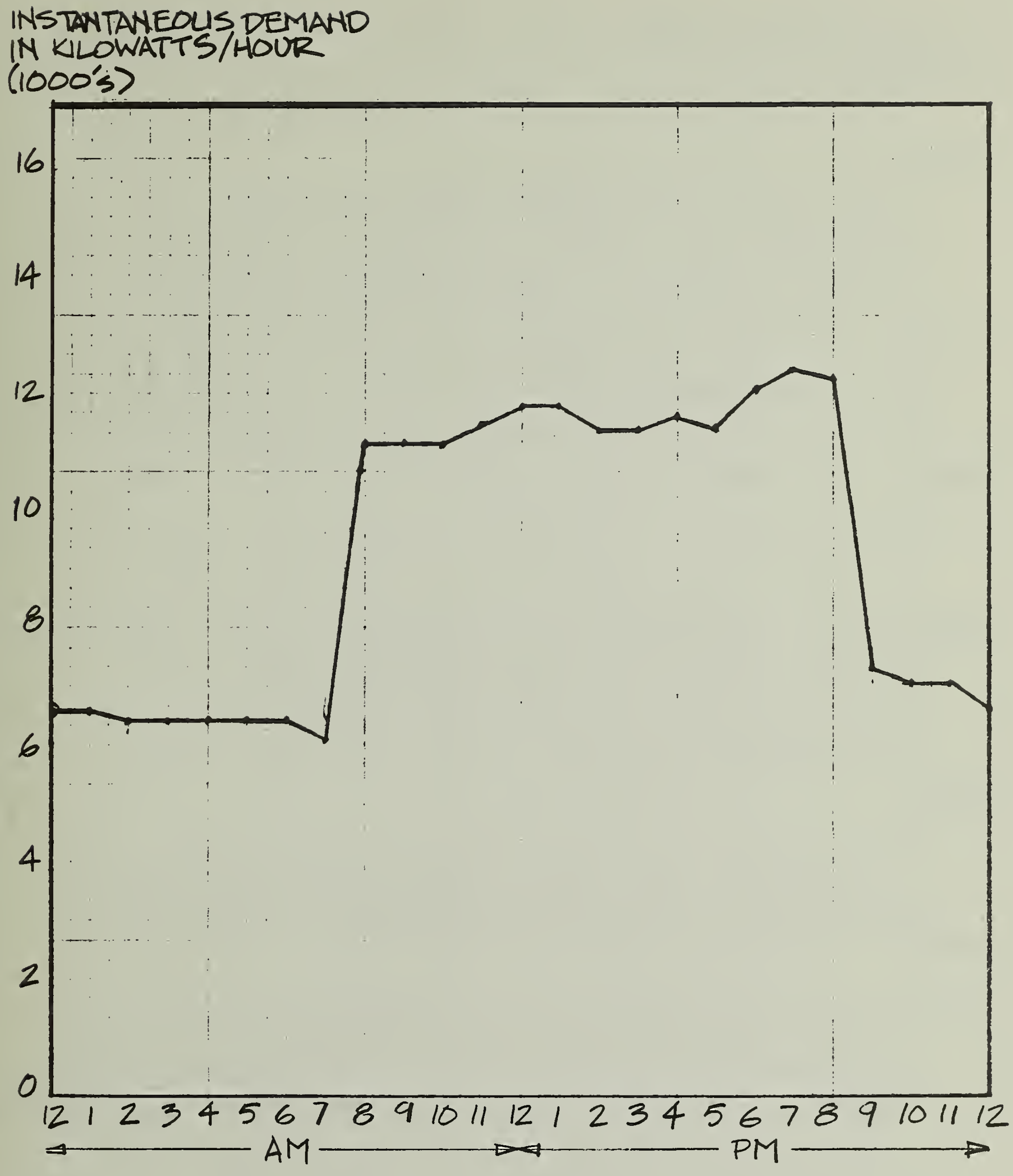

FIGURE 22. ANTICIPATED DAILY ELECTRICAL CONSUMPTION CURVE

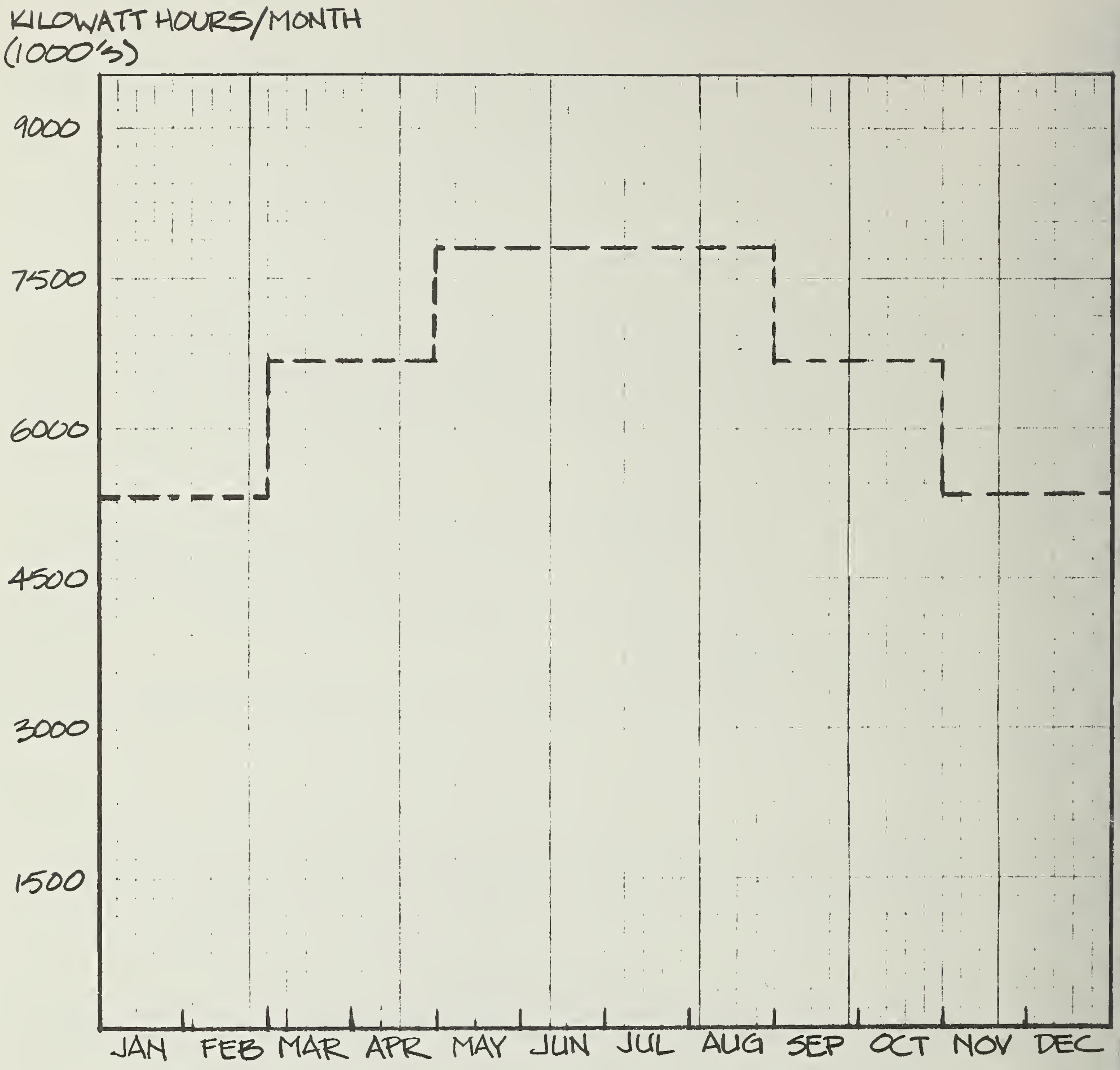

FIGURE 23. Anticipated Yearly Electrical Consumption Curve

The anticipated daily and annual natural gas load distribution for the proposed project are presented in Figures 24 and 25.[1]

d. Telephone

Telephone service to the proposed project would be provided by Pacific Telephone and Telegraph Company, which indicates that the facilities on Blanken Avenue and Bayshore Boulevard could meet the demand generated by the proposed project.[2] On-site installation of conduit would be concurrent with the undergrounding of other utilities. The interconnection in the Blanken Avenue exchange would cause disruption of traffic for approximately six weeks. (See Section IV., 3, page 60)

e. Dry and Wet Weather Sanitary Flows

The proposed project would increase surface water runoff during storms by up to 15 cubic feet per second for the 25.4 acres of building and parking areas. Three alternatives have been developed for routing surface runoff. The final determination would be made by the City. The three alternatives are:

- Continue channeling all surface runoff into the Bay through an extension of the existing system. This alternative appears unlikely to be approved by the Bay Conservation and Development Commission and the Regional Water Quality Control Board.
- A dual system by which all surface runoff from the developed portion of the proposed project would be combined with sewage for processing in the Southeast Water Pollution

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[1] Although the warmest month for occupancy of the proposed is September, in terms of the "felt" temperature (highest humidity and least wind), the least natural gas consumption would occur in July, which has the highest 24-hour temperature (and has less humidity, and feels cooler).

[2] Jack McGovern, Pacific Telephone, letter and telephone conversation, June 30, 1975.

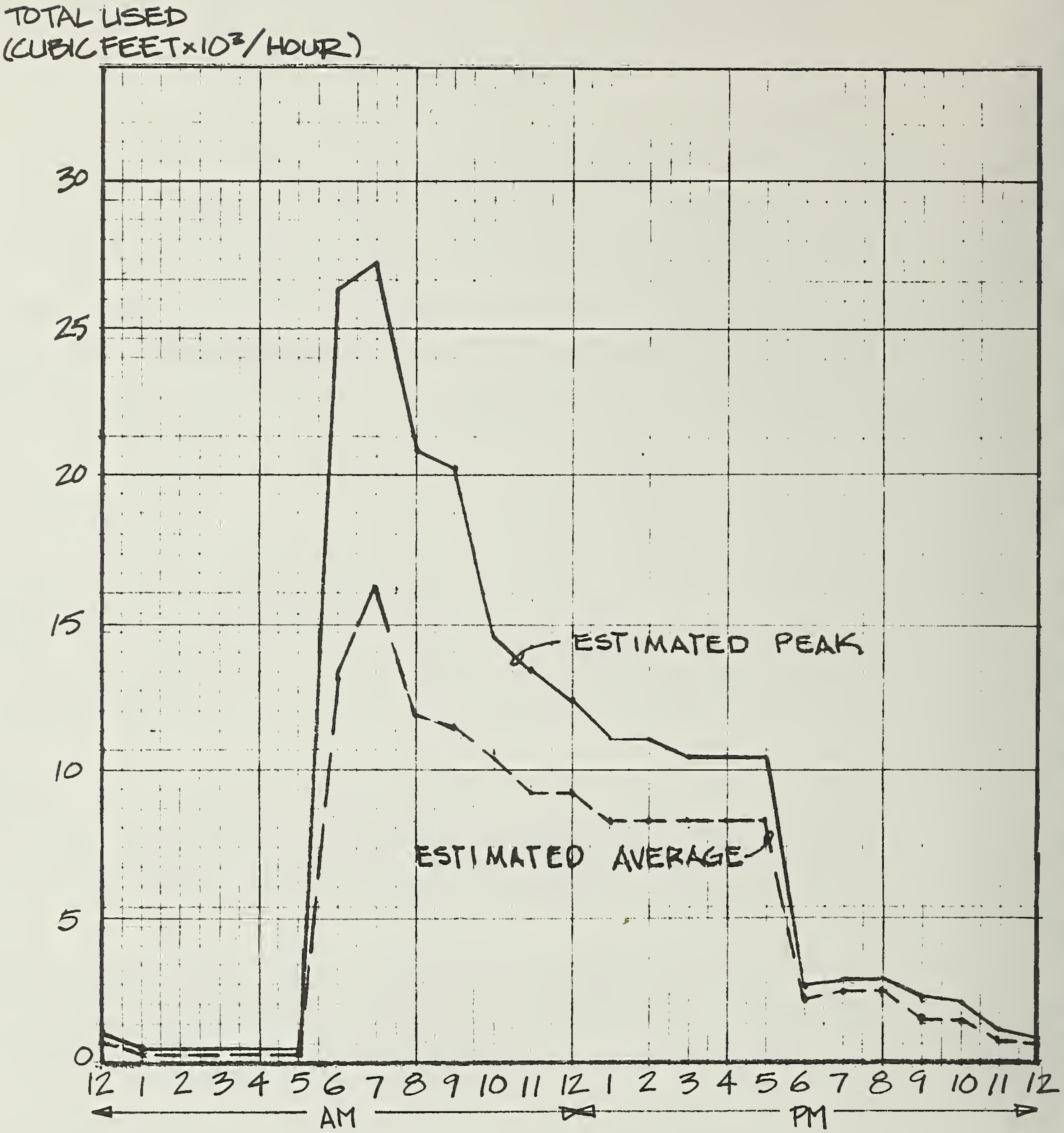

FIGURE 24. ANTICIPATED DAILY NATURAL GAS CONSUMPTION CURVE

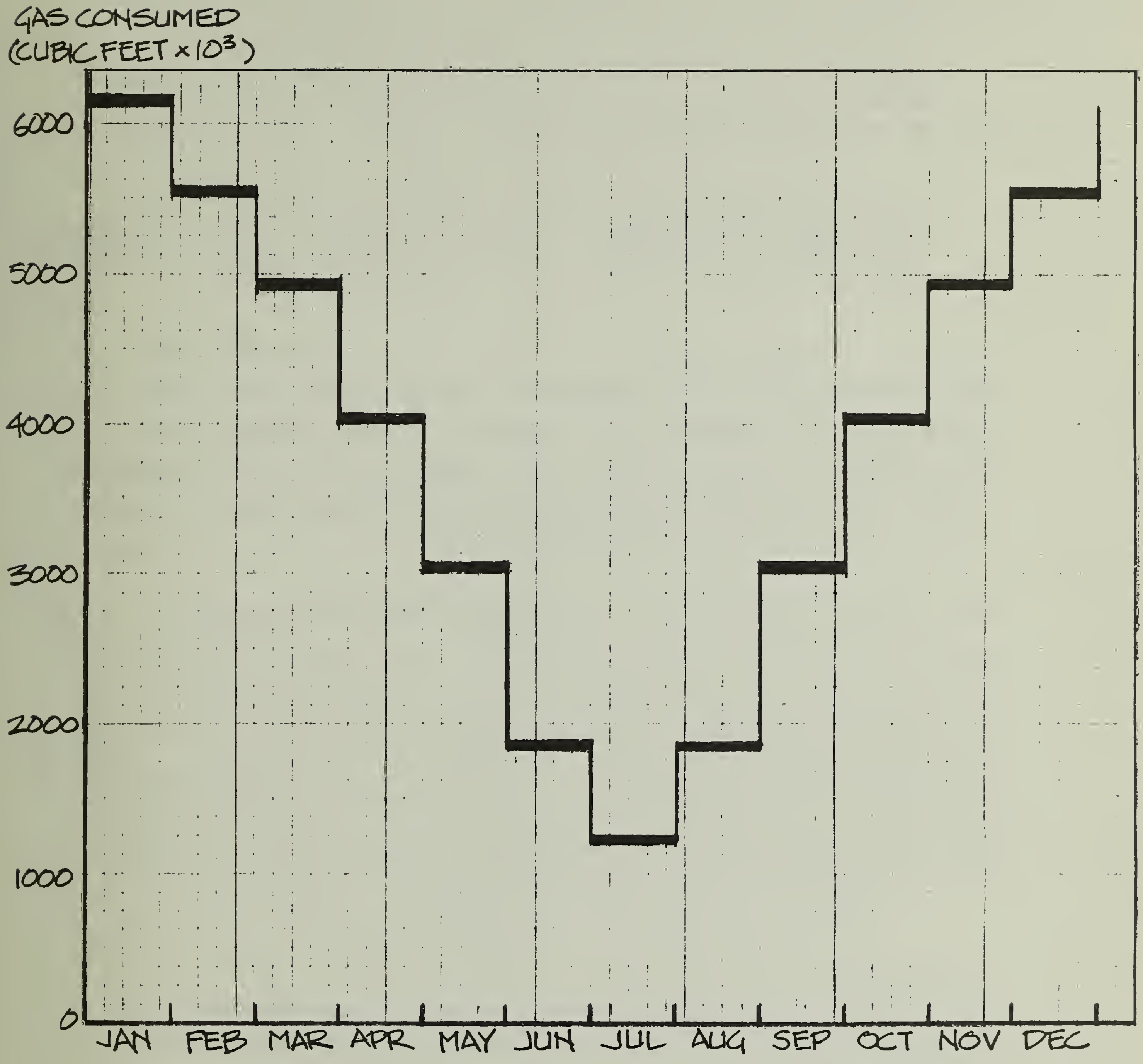

FIGURE 25. ANTICIPATED YEARLY NATURAL GAS CONSUMPTION CURVE

Control Plant. This approach would represent a peak wet-weather flow of some 23 million gallons a day, to be processed, or about 42 percent of the plant's existing peak capacity of 55 million gallons per day. All surface water not on the developed portion of the property would be channeled through the existing system into the Bay.

- A total system to collect all surface runoff on the proposed project site and route to the Southeast Water Pollution Control Plant. This system would have to handle approximately 50 million gallons per day in peak wet weather, about 91 percent of the plant's current capacity.

The plant is often unable to handle peak wet-weather flow, and excess untreated sewage is discharged into the Bay.[1] The plant is to be expanded to a capacity of 65 (approximately 142 for peak instances) million gallons per day by 1980, but the cumulative demands of the proposed project and other sections of the area may tax this expansion.[2]

The proposed project when fully developed would generate 210,000 gallons of sanitary waste per day.[3] This would increase the load on the Southeast Water Pollution Control Plant by approximately 0.38 percent[4]. The proposed project would utilize the existing sewage tunnel under Bayview Hill for channeling proposed project sewage to the Southeast Water Pollution Control Plant; however, the City has not yet approved use of this system.

---

[1] In 1975 the plant overflowed 82 times. Donald Birrer, San Francisco Department of Public Works, telephone conversation, April 4, 1976.

[2] Ibid.

[3] Based on the quantity of water consumed by the proposed project excluding irrigation; see Appendix H.

[4] The current peak hydraulic and processing capacity of the plant is 55 million gallons.

In 1970, the Clean Water Act set standards for the treatment of dry and wet weather sanitary flows. In 1974, the City of San Francisco developed the San Francisco Wastewater Management Master Plan for wastewater treatment to meet the Federal and State Standards. On May 18, 1976, the San Francisco Bay Regional Water Quality Board issued a Cease and Desist Order on the development of all projects in the City east of Twin Peaks. It is not determined how long this ban would be in effect.[1]

f. Solid Waste

The proposed project would generate about 11,000 pounds (5.5 tons) of solid waste per business day.[2] The refuse would be trucked to the City's sanitary landfill site in Mountain View which is expected to be filled in the next four years (no replacement site has yet been found).[3]

12. Emergency Services

a. Fire Protection

The San Francisco Fire Department has indicated that fire protection service could be available to meet the needs of the proposed project, provided that the proposed project meet the applicable code requirements and access needs, and that external and internal water supply were provided as stipulated by the San Francisco Fire Department.[4]

---

[1] Douglas Holmen, City Planning Dept., May, 1976.

[2] Based on lb/100 sq. ft. of floor space per day, as stipulated in California Solid Waste Management Board Bulletin No. 2, Solid waste generation factors in California, July 8, 1974.

[3] Three or four truck trips would be required per day for removal of the refuse.

[4] Gilbert Bendix, Superintendent, Bureau of Engineering and Water Supply, San Francisco Fire Department, letter September 18, 1975.

b. Police Service

A report prepared by the San Francisco Police Department (Appendix J) predicts that the number of incidents requiring police response would be slightly over 150 for a one-year period. The Department estimates that the proposed project could require police services costing about $81,800 per year.

13. Economics

The following discussion summarizes the Economic Report prepared by Keyser/Marston Associates, Appendix G.

a. Employment

Upon full implementation of the proposed project, permanent employment for a typical year is estimated by land use shown in Table 10, page 85.

Total permanent employment generated by the proposed project is estimated at 4,940. Approximately 4,400 of the permanent jobs would be office-related; the remainder would be distributed among restaurant, hotel, and retail employment. A distribution of employees by occupation, as shown in Table 10, page 85, indicates that about 84 percent of the jobs would be white-collar jobs and the remaining 16 percent would be blue-collar jobs. No positions would be guaranteed.

1) Minority Employment

In 1970 about 7,500 unemployed people, largely a minority population, lived in the South Bayshore sector of San Francisco. Based on the 1970 Census of Population, the occupational distribution of unemployed minority people throughout the metropolitan area is projected as follows:

TABLE 10

Permanent Employment
by Land Use and Occupation

	Office		Restau-			Total	
	Workers	Maintenance	rant	Hotel	Shops	No.	%
White Collar Occupations							
Professional/Technical	130	1	2	4	3	140	3
Managers/Officers/Proprietors	950	8	50	40	30	1,080	22
Clerical	2,010	3	2	20	20	2,130	43
Sales	780	1	2	--	30	810	16
Blue Collar Occupations							
Service	260	--	160	110	20	550	11
Craftsmen	90	40	2	8	10	150	3
Transport Equipment Operatives	--	15	2	4	15	35	1
Other	40	1	--	4	4	50	1
Total	4,320	70	220	190	130	4,940	100

Source: Keyser/Marston Associates. The number of projected employees per unit area is an estimate based on current practices in new developments.

TABLE 11

Occupational Distribution of San Francisco Unemployed, 1970

	Percent
White Collar Occupations	
Professional/Technical	5
Managers/Officers/Proprietors	2
Clerical	16
Sales	4
Blue Collar Occupations	
Service	17
Craftsmen	14
Operatives/Transportation Equipment	25
Other	17
Total	100%

The jobs generated by the proposed project for which minority persons living in the immediate area of the proposed project site are qualified would be largely clerical and service positions (approximately 3,480 projected jobs, or 70 percent of the total). Employment at the proposed project may lower the percentages of unemployed clerical and service positions in Table 10; however, the extent to which this may occur cannot be determined this time.

2) Construction Employment

Construction employment attributable to the proposed project would span the projected six-year building period and is estimated at an average of 220 employees per year, as follows:

Total value of new improvements excluding land (1975 dollars)	$48,300,000
On-site labor share of improvement value @ 30%	14,500,000
Total person weeks of construction labor at $310/week	46,800
Total person years of construction labor at 35 weeks/year	1,300
Average yearly construction employment over six years	220

The creation of nearly 4,900 jobs (nearly 3,400 of which could be available to people living in adjacent communities) is consistent with the economic-employment discussion in the South Bayshore Study: "the creation of job opportunities for the citizens of the South Bayshore community is a pressing immediate problem"(page 78). No jobs created at the proposed project, however, would be guaranteed for any residents. Positions would be filled on the basis of personal qualifications.

b. Municipal Costs

Increases in annual municipal capital and operating costs due to the development of the proposed project would be estimated at $90,000 (1975 dollars). The proposed project developer would provide on-site and off-site capital improvements related to municipal services including roads, street lights, and installation of sewers, water mains, and storm drains to connect with existing municipal systems.

Based on the current experience of each of the City departments involved and the characteristics of the capital improvements provided by the developer, the following increases in municipal costs are estimated:

TABLE 12 Estimated Municipal Costs

Urban Service	Increase in Annual Municipal Operating Cost (1975 dollars)
Police protection	$82,000[1]
Fire protection	Minimal[2]
Sanitary sewerage	$99,000[3]
Water service	Profitable operation paid for through charges for service.
Storm drainage	Dependent on system design[4]
Street maintenance & cleaning street lights & traffic signals	$8,000+[5]

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[1] Based on report in Appendix J.

[2] Based on letter from Gilbert G. Bendix, Superintendent of the Bureau of Engineering & Water Supply, San Francisco Fire Department, September 18, 1975.

[3] Based on recommendations of Stone & Youngberg, "Sewer Revenue Program Study", pp. 54-55, using fee schedule for 1981-82. Fees are set to cover costs.

[4] Actual storm drainage system not yet determined. If storm drainage were channeled to water pollution control plant, rate would be the same as Item 3.

[5] Estimate given by Dick Evans, Department of Public Works, September 14, 1975 , phone conversation.

c. Municipal Revenues

Municipal tax revenues to the City and County of San Francisco generated by the proposed project are estimated for a typical year after completion of development as follows:

TABLE 13 - Estimated Municipal Costs

Tax Revenue Source	Estimated Annual Tax Revenue (1975 dollars)	City Share (percent)	City of San Francisco Annual Tax Revenue (1975 dollars)
Property tax	$1,800,000	58.0[1]	$1,050,000
Employer's payroll expenditure tax	494,000[2]	100.0	490,000
Sales tax	788,000	15.4[3]	120,000
Hotel room tax	126,000	100.0	126,000
Total	3,210,000		$1,790,000

---

[1] Property taxes are collected for the City and County of San Francisco, the San Francisco Unified School District, BART, and other miscellaneous special districts. The City of San Francisco receives $7.40 per $100 of assessed valuation, equivalent to 58 percent of the total property tax rate of $12.75. The proposed project site was assessed for $94,360 in 1974.

[2] The estimated employer's payroll expenditure tax generated by the proposed project is based on a projected total payroll expense of $79,700,000 in 1975 dollars.

[3] While the State of California collects a 6½ percent sales tax on goods sold in San Francisco, only 1 percent of the total tax is returned to the City, equivalent to 15.4 percent of total sales tax revenues collected the the State. Sales tax revenues of 6½ percent to be collected by the State of California are based on 139,688 square feet of restaurant and small shop space, operating at a projected average taxable sales volume of $12,100,000.

[4] Hotel rooms would be in the range of $25 - 35 per person/ per room/per night.

The aggregate market value of land and improvements for the proposed project would be some $56,000,000 (based on development costs). The projected property tax revenues to the City of San Francisco would represent an increase of $1,037,000 (the proposed project site currently generates City property tax revenues of about $7,000). When the proposed project is fully implemented, the total revenues to the City would be $1,785,000 (1976 dollars).

d. Impact on Office Space

The 853,000 square feet of office space in the proposed project would be less than two percent of the estimated 50 million square feet of office space in Downtown San Francisco in 1981 (Appendix I).

e. Impact on Hotels and Motels

The 275 rooms of the proposed hotel represents 8 percent of the approximately 3,400 hotel and motel rooms in San Mateo County available to airport travelers, business persons and people attending conventions.[1] The estimated 1,980 room receipts for the hotel would be less than 5 percent of projected room receipts for San Mateo County hotels and motels (the expected annual receipts from airport travelers would fall within a range of $1.2 to $1.75 million).

14. Visual Impact

The two 15-story highrise towers would contrast with Bayview Hill and could be seen from adjacent neighborhoods west and northwest of the proposed projected area. Figure 26 identifies the sections shown in Figure 27, page 92, which contains sections of the proposed project and the local area. The tower structures would begin to be silhouetted against the skyline when viewed from the south from a distance of less than 2,100 feet.

Figures 29A through 29E, pages 94 to 99, show panoramic views of the proposed projected site from various locations in the adjacent neighborhood and the James Lick Freeway (Figure 28, page 93, provides a key to the location of the view). Views from the northwest over the portions of Little Hollywood, the Costa Brava

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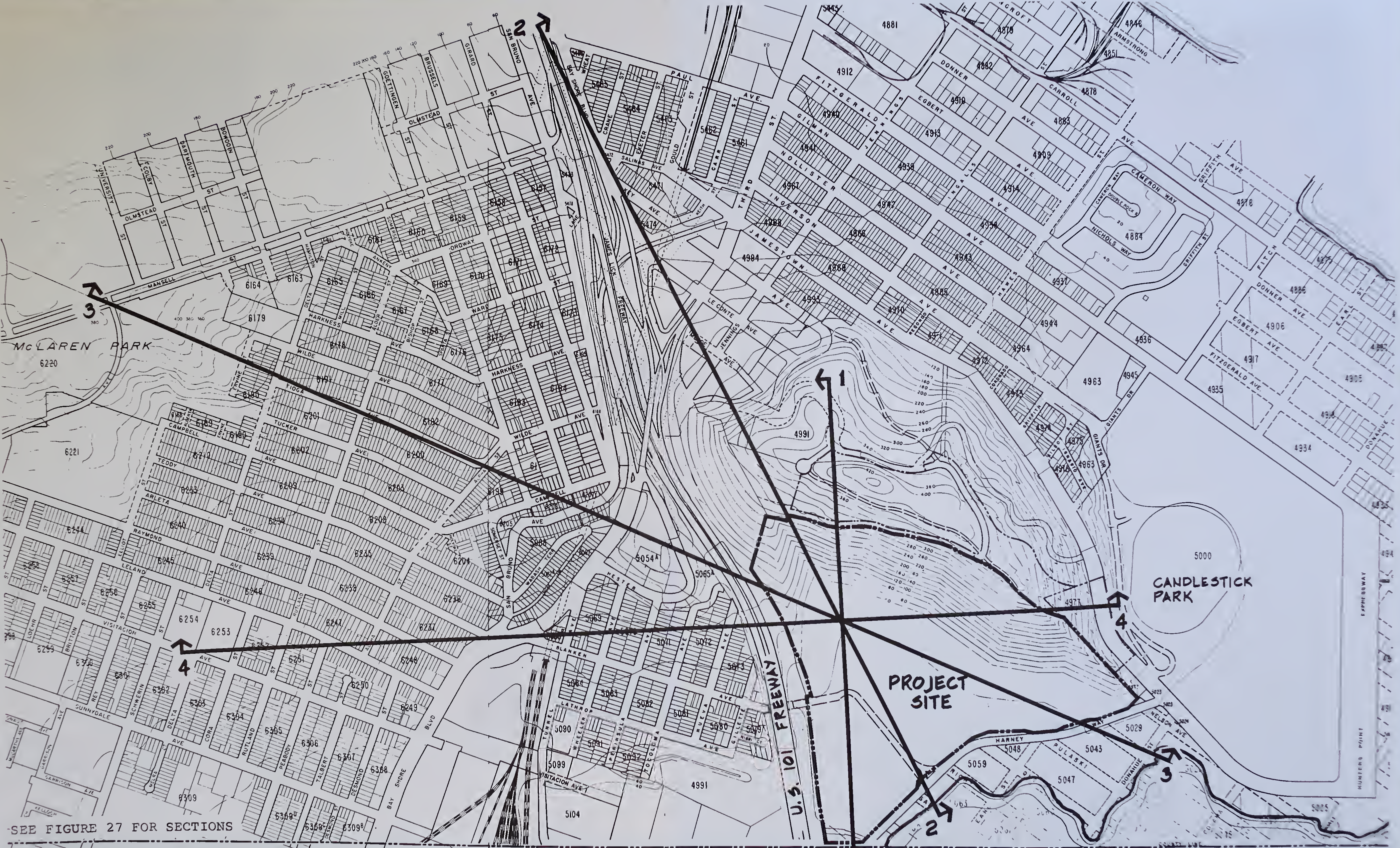
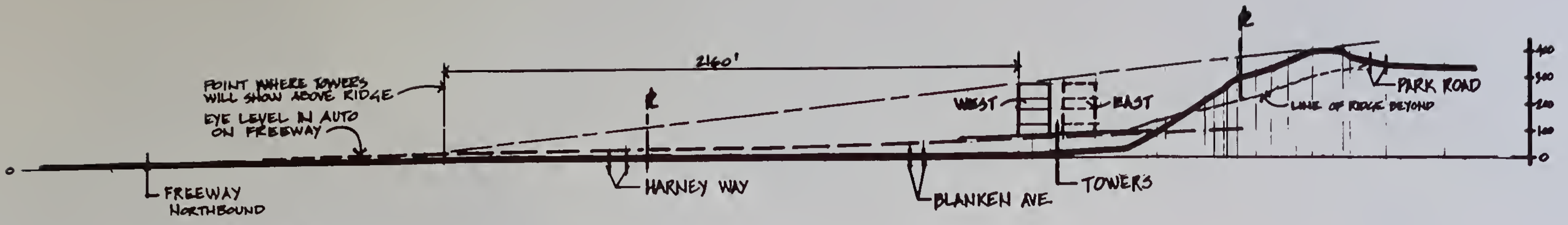
[1] John Steen, Executive Director, San Mateo Vistors and Convestion Bureau, May 1976.

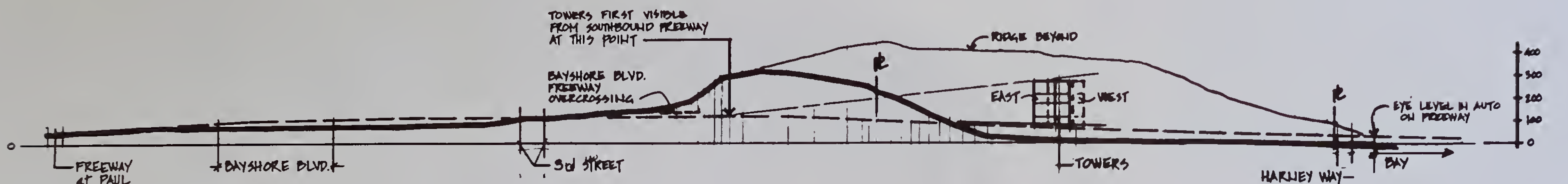


SEE FIGURE 27 FOR SECTIONS

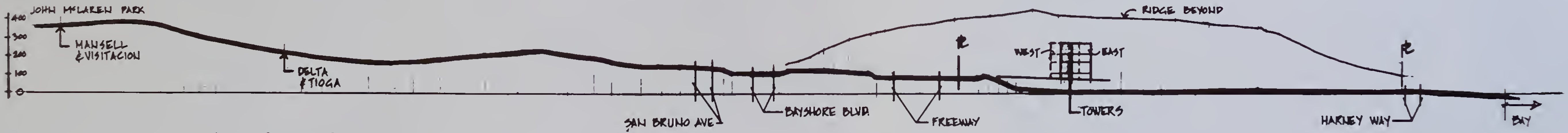
FIGURE 26. LOCAL AREA AND PROPOSED PROJECT SECTIONS LOCATION MAP



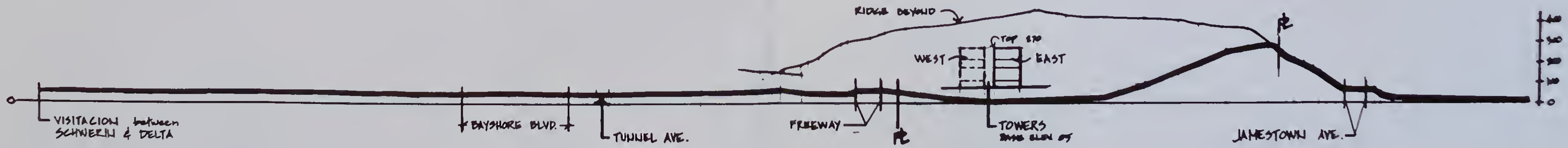
SECTION 1
LOOKING WEST


TOWERS FIRST VISIBLE FROM SOUTHBOUND FREEWAY AT THIS POINT
RIDGE BEYOND
BAYSHORE BLVD. FREEWAY OVERCROSSING
EAST
WEST
EYE LEVEL IN AUTO ON FREEWAY
400
300
200
100
0
FREEWAY at PAUL
BAYSHORE BLVD.
3rd STREET
TOWERS
HARNEY WAY
BAY

SECTION 2
LOOKING EAST



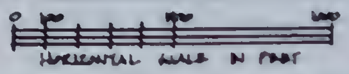
SECTION 3
LOOKING NORTHEAST

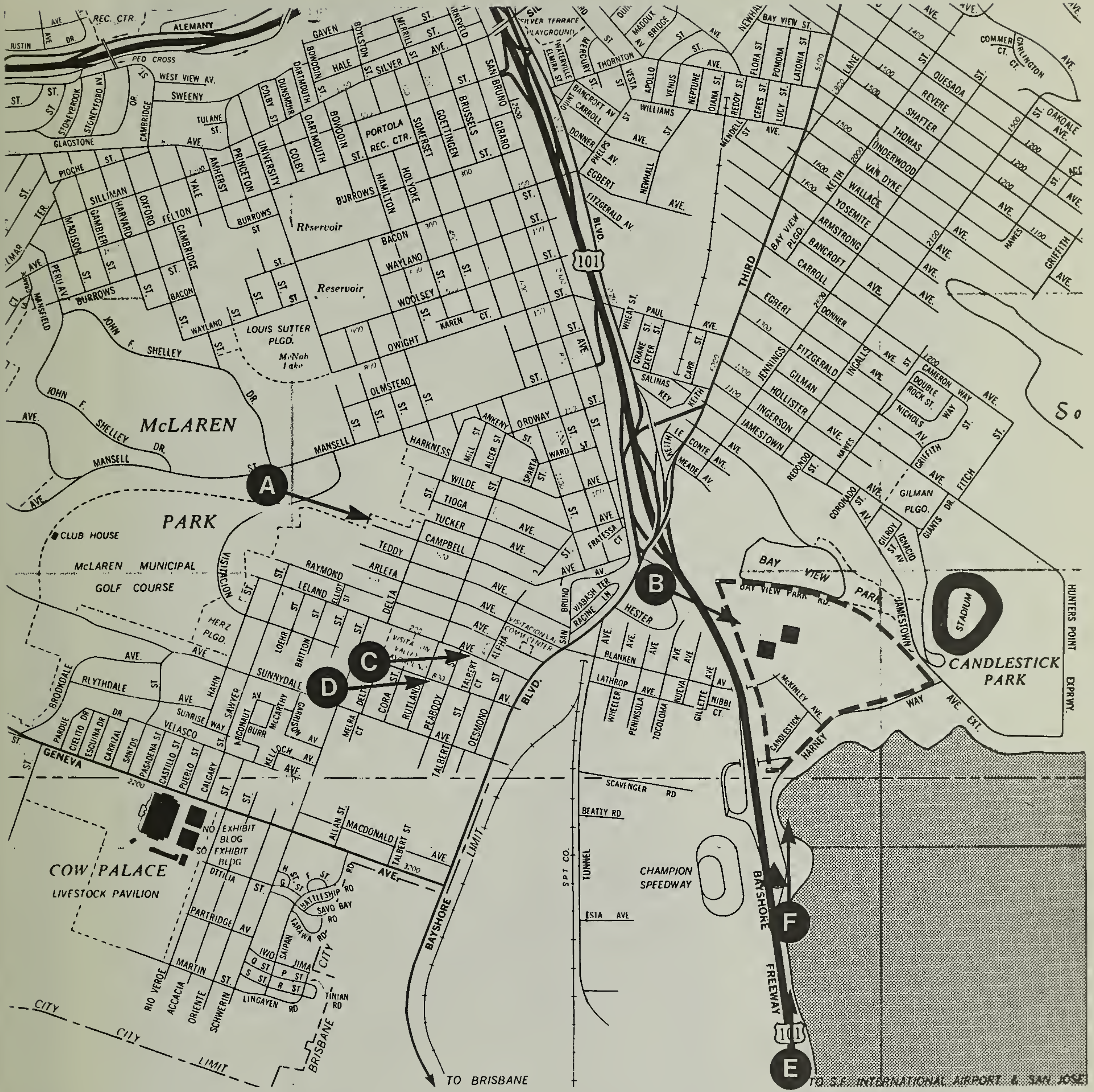


SECTION 4
LOOKING NORTH

SEE FIGURE 26 FOR SECTION LOCATIONS

FIGURE 27. LOCAL AREA AND PROPOSED PROJECT SECTIONS





X LOCATION FROM WHICH PHOTO WAS TAKEN

▲ POINT ON FREEWAY AT WHICH TOWERS BREAK SKYLINE

FIGURE 28. PROPOSED PROJECT VIEW LOCATIONS MAP

NORTH

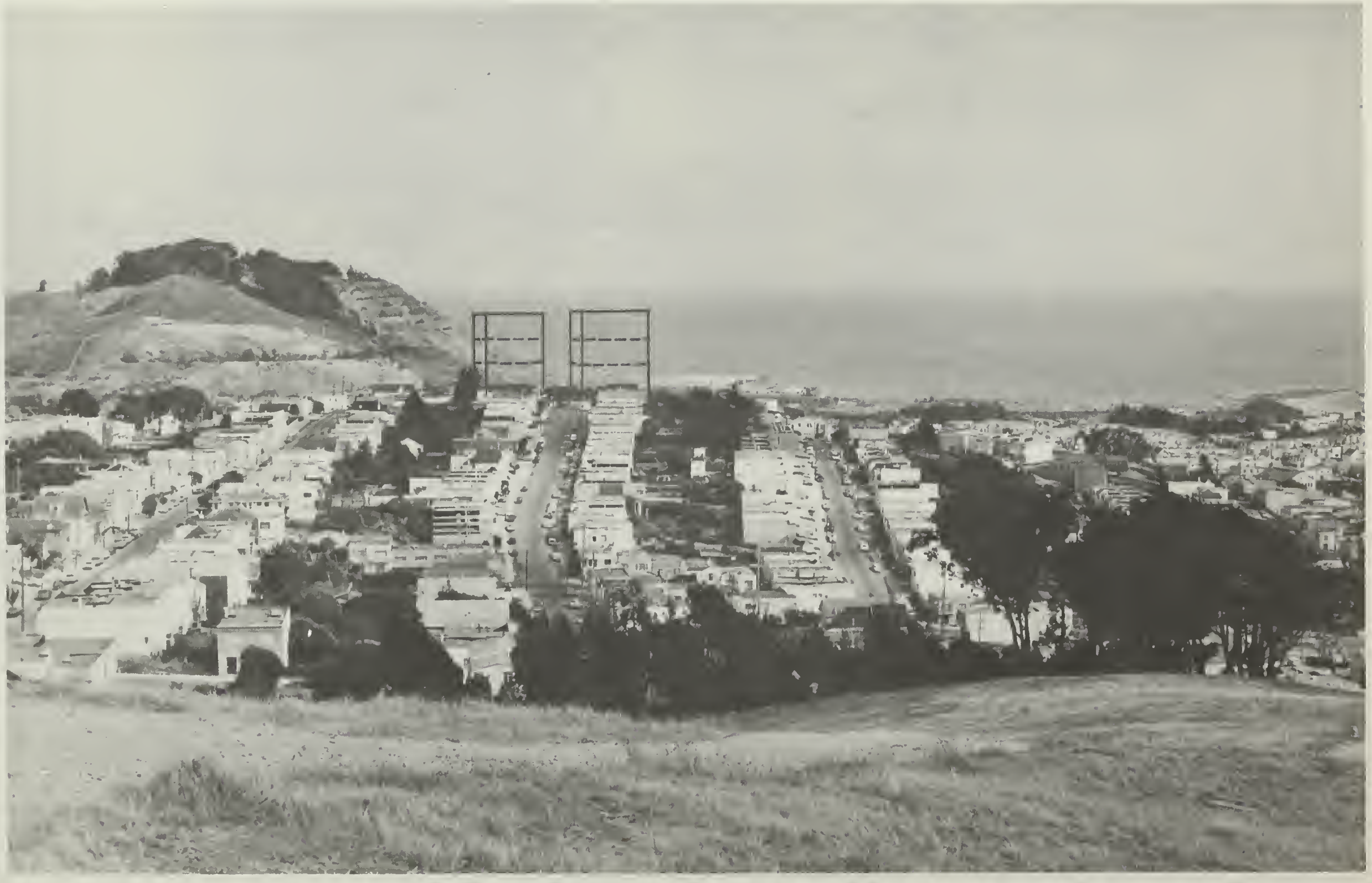


FIGURE 29A. VIEW OF PROPOSED PROJECT FROM McLAREN PARK
(1 MILE NORTHWEST)

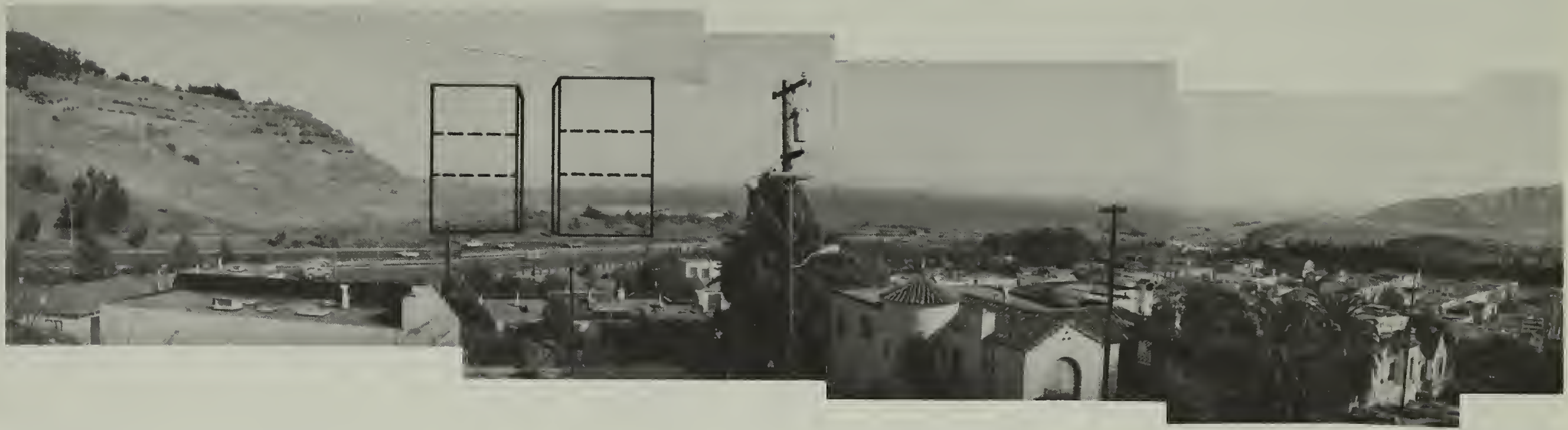


FIGURE 29B. VIEW OF PROPOSED PROJECT FROM HESTER AVENUE NEAR COSTRA BRAVA RESTAURANT (¼ MILE NORTHWEST)

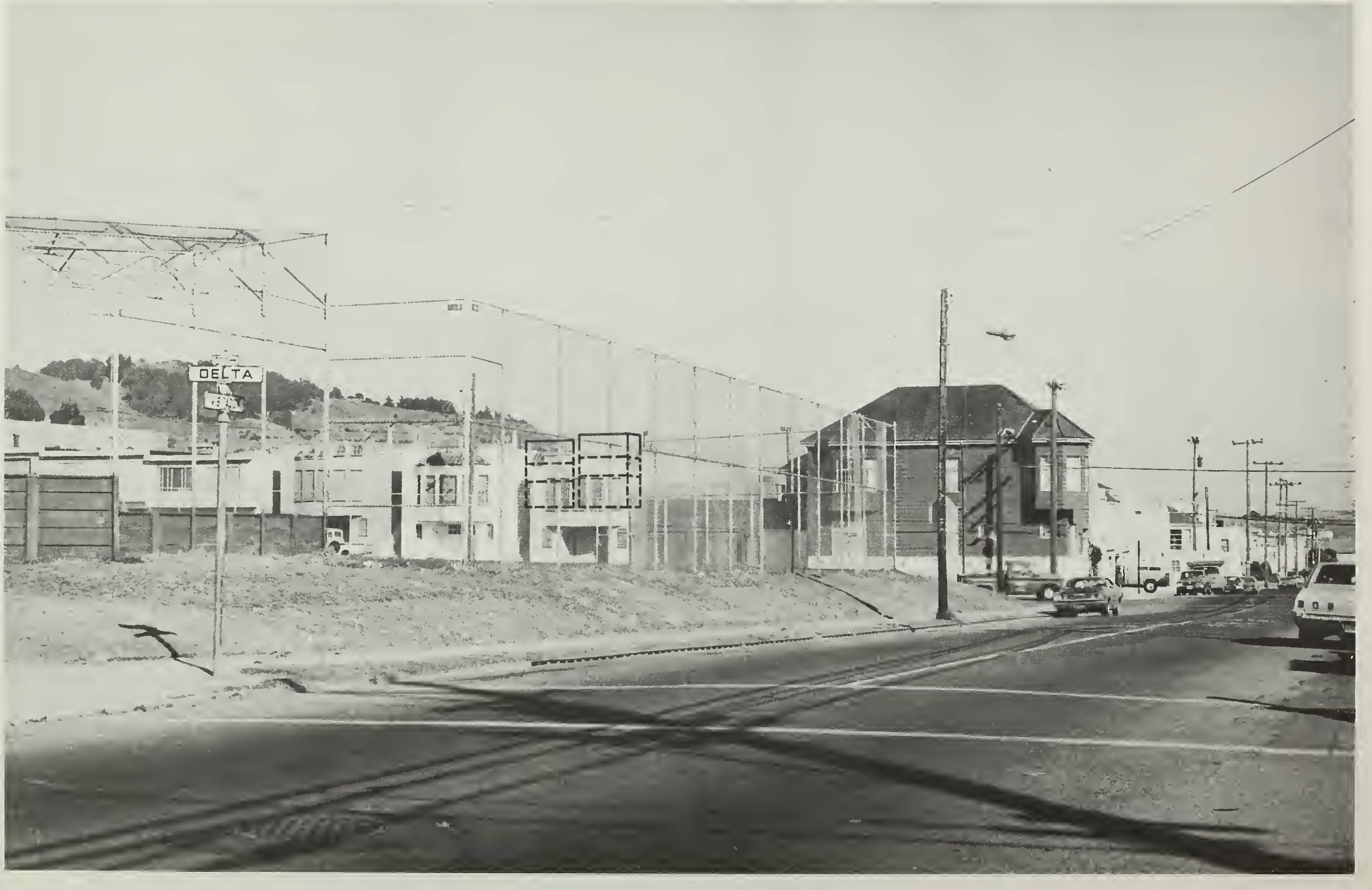


FIGURE 29C. VIEW OF PROPOSED PROJECT FROM DELTA STREET AND VISITACION AVENUE (0.8 MILE WEST)

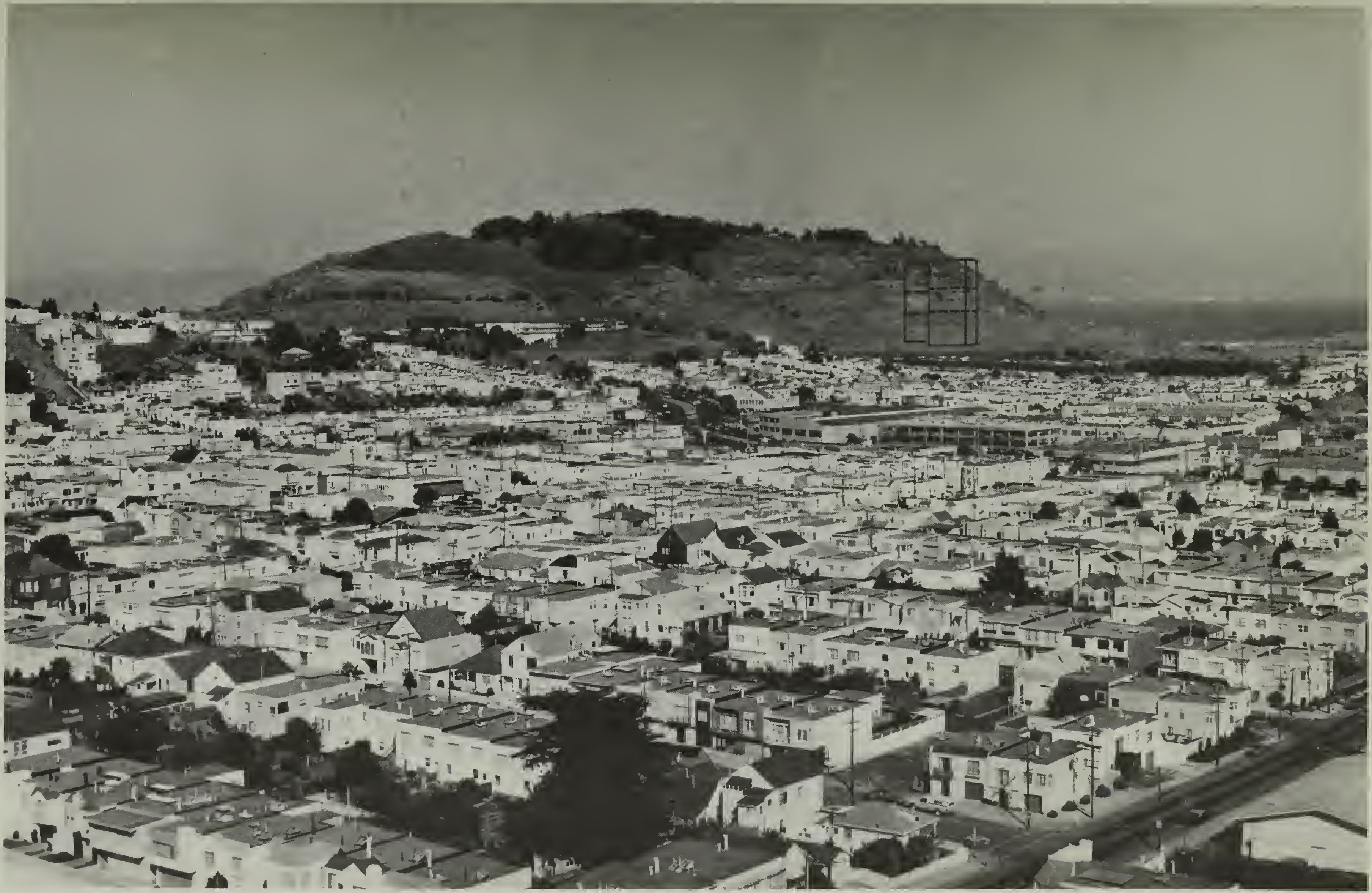


FIGURE 29D. VIEW OF PROPOSED PROJECT FROM GENEVA TOWERS
(1 MILE SOUTHWEST)

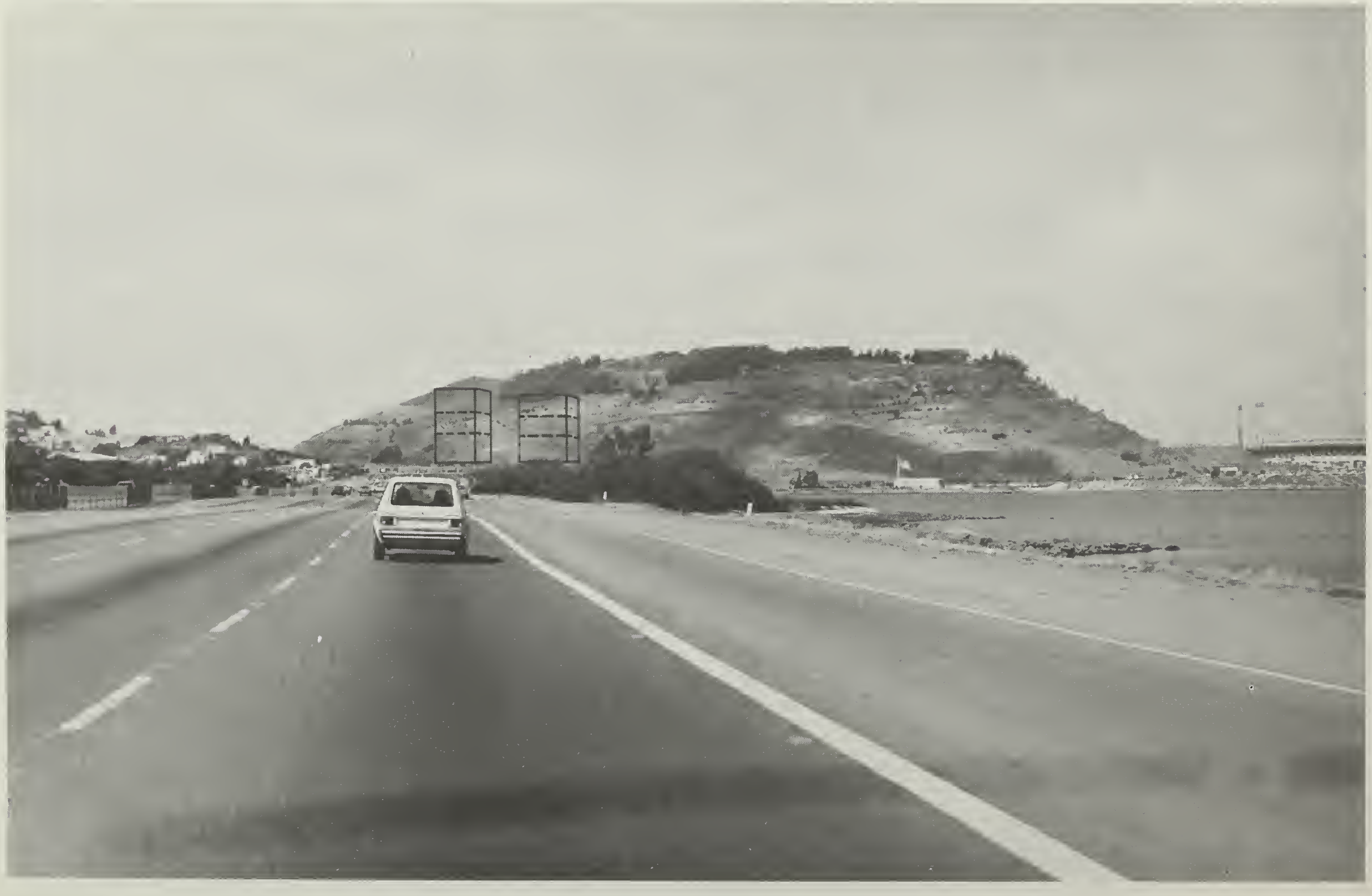


FIGURE 29E. VIEW OF PROPOSED PROJECT FROM JAMES LICK FREEWAY (1¼ MILES SOUTH)

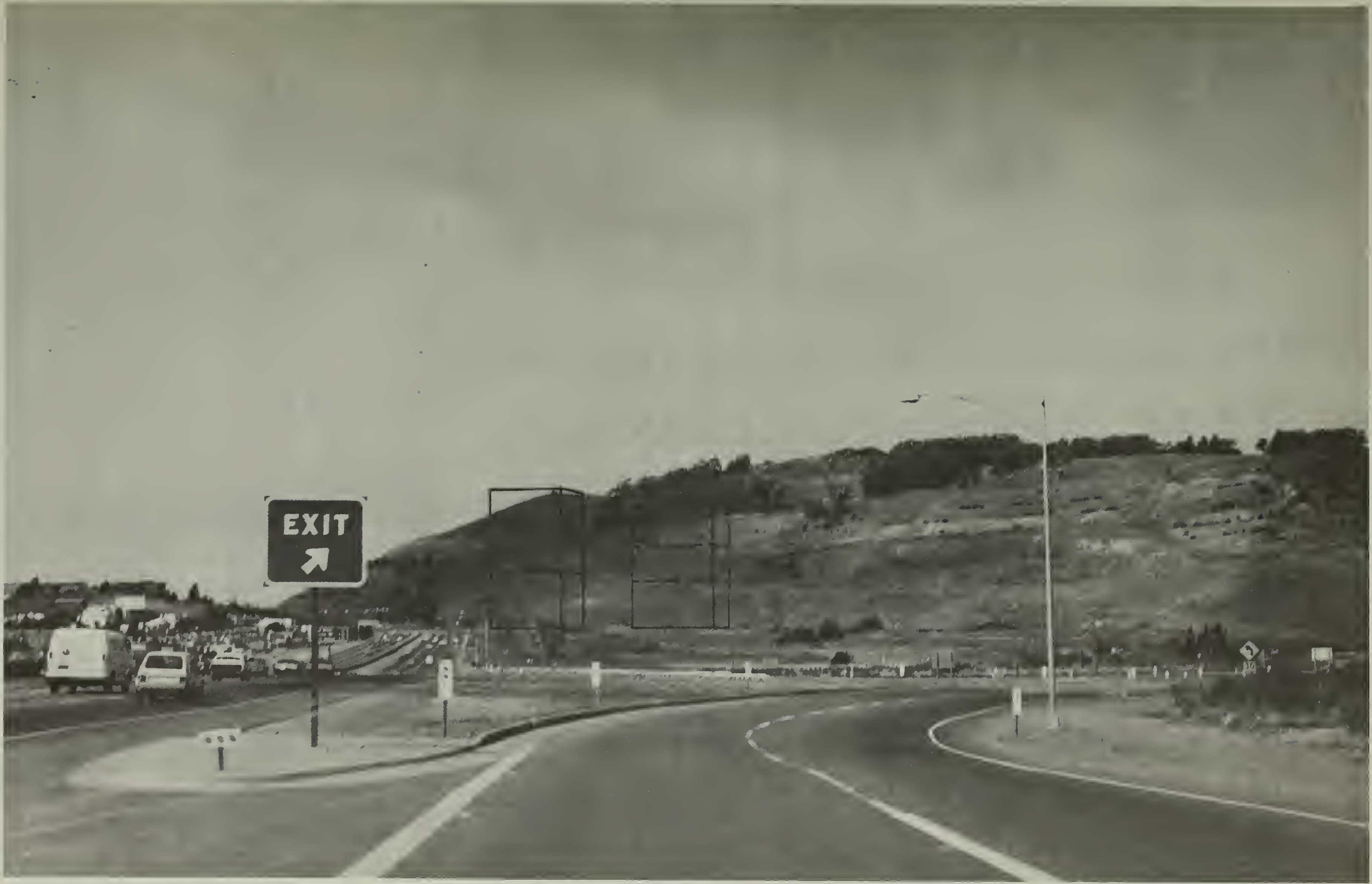


FIGURE 29F VIEW OF PROPOSED PROJECT FROM HARNEY WAY OFF-RAMP (3/4 MILE SOUTH)

Restaurant area, and the hill leading to McLaren Park, would be obstructed by the towers. The view from the Costa Brava Restaurant would be partly blocked by the towers, although the restaurant's major dining areas are oriented to the north, away from the proposed project.

Most views from Visitacion Valley toward the proposed project site would include only the upper stories of the towers. Any view of the proposed project site from the west or southwest at an elevation of more than four stories, such as the Geneva Towers, would be obstructed by the project's towers.

a. Relationship to Comprehensive Plan

The design and siting of the proposed project structures (Figures 3, page 7; 3A, page 8; 4, page 9) especially the high-rise towers, are inconsistent with the following design principles, objectives, and policies of the Urban Design Plan Element of the Comprehensive Plan:

City Pattern

Principles	2 (p. 23): Street layouts and building forms which do not emphasize topography reduce the clarity of the city form and image.
	4 (p. 24): Where large parks occur at tops of hills, low-rise buildings surrounding them will preserve views from the park and maintain visibility of the park from other areas of the city.
Policy	1 (p. 36): Recognize and protect major views in the city, with particular attention to those of open space and water.

Conservation

Principle	2 (p. 55): New development can enhance and preserve San Francisco's distinctive

qualities if it is designed with consideration for the prevailing design character and the effect on surroundings.

Major New Developments

On page 76 of the Urban Design Plan the proposed project site is shown as a location where tall building would block views (of Bayview Hill) from roadways.

Principles

1 (p. 80): The relationships of a building's size and shape to its visibility in the cityscape, to important natural features and to existing development determine whether it will have a pleasing or a disruptive effect on the image and character of the city.

1B: Extremely massive buildings on or near hills can overwhelm the natural land forms, block views, and generally disrupt the character of the city.

1C: Low small-scale buildings on the slopes of hills, at their base and in the valleys between, complement topographic forms and permit uninterrupted views.

1D: (p. 81): Low buildings along the waterfront contribute to the gradual tapering of height from hilltops to water that is characteristic of San Francisco and allows views of the Ocean and the Bay.

1E: Larger, taller buildings can blend pleasantly with small-scaled areas if the change in scale is not excessive and if their form or surface pattern is articulated to reflect the existing scale.

4 (p. 83): The relationship between areas of low, fine-scaled buildings and areas of high, large-scaled buildings can be made more pleasing if the transition in building height mass between such areas is gradual.

7 (p. 85): Buildings which meet the ground and reflect the slope of the hill relate to the land form.

Policies

2 (p. 91): Avoid extreme contrast in color, shape, and other characteristics which will cause new buildings to stand out in excess of their public importance.

4 (p. 92): Promote building forms that will respect and improve the integrity of open spaces and other public areas.

5: Relate the height of buildings to important attributes of the city pattern and to height and character of existing development.

6 (p. 94): Relate the bulk of buildings to the prevailing scale of development to avoid an overwhelming or dominating appearance in new construction.

The urban design guidelines for the height of buildings, on page 93, show the northern portion of the proposed project site as 0-40 feet and the southern portion 41-88 feet.

Policies

7 (p. 96): Recognize the special urban design problems posed in development of large properties.

The proposed project appears to be consistent with the following objectives, principles, and policies of the Urban Design Plan Element of the Comprehensive Plan:

City Pattern

Principles

9 (p. 29): Special lighting fixtures and quality of light can enhance the identity of districts, distinctive areas, and important shopping streets

Policy

4 (p. 36): Protect and promote large-scale landscaping and open space that define districts and topography.

Major New Developments

Principles	11 (p. 86): A building situated in a visually dominant position, whose exterior is blank and uninteresting, does not relate to surrounding development and tends to repel the observer's attention.

Neighborhood Environment

Principles	9 (p. 109): Open, unlandscaped parking areas are dull and unattractive, and generally have a deleterious effect upon their surroundings.
Policies	3 (p. 128): Provide adequate lighting in public areas. 8 (p. 129): Provide convenient access to a variety of recreation opportunities. 12 (p. 130): Install, promote and maintain landscaping in public and private areas.

15. Neighborhood Concerns

The proposed project developers met with the following neighborhood organizations to discuss the proposed development:

The Bayview-Hunters Point Community Coordinating Council
(June 3 and 10, 1975, January 27, March 30, 1976)

The Visitacion Valley Merchants Association
(June 12 and 18, August 25 and 27, 1975)

The All Peoples' Coalition
(June 17, August 13, September 18, 1975,
February 12 and 21, 1976)

The Visitacion Valley Improvement Association
(June 23, October 27, 1975, March 15, 1976)

The Little Hollywood Improvement Association
(June 20, September 29, October 8 and 22, 1975)

The San Francisco Industry and Merchants Association
(July 17, August 26, September 19, 1975)

Concerns were expressed at these meetings about the proposed project and its probable effect on the adjacent neighborhoods; some are listed below.

a. Employment. The project should provide permanent employment as well as construction work for residents of the South Bayshore area, Visitacion Valley and Little Hollywood (Figure 11, page 32).

b. Property values. Members of the Little Hollywood Improvement Association were concerned about whether their property values would be affected by the proposed project. (The Economic Consultants do not think there would be any change in property values due to the proposed project - Appendix I).

c. Commercial shops. The Visitacion Valley Merchants Association does not want commercial activity on the proposed project site that would compete with existing neighborhood shops and stores. The Bayview-Hunters Point Community Coordinating Council would prefer a regional shopping center in the area.

d. Utilities. The project should not tax existing public utility services.

e. Neighborhood identity. Members of the Little Hollywood Improvement Association are concerned lest the proposed project would detract from a sense of neighborhood identity in their area.

f. Alternative land uses. The Little Hollywood Improvement Association would like the proposed project site to be studied for possible use as open space.

The Bayview-Hunters Point Community Coordinating Council, the San Francisco Industry and Merchants Association, and the Visitacion Valley Merchants Association have written in support of the proposed project.[1]

16. Related Local Plans and Proposed Projects

1. Plans

The San Francisco Bay Conservation and Development Commission (BCDC) has jurisdiction over the Bay shoreline up to 100 feet inland, which would include several portions of the southern boundary of the proposed project site (Figure 3, page 7). Although BCDC would review the proposed project plans, no formal action is expected due to the relatively minor amount of proposed project property in BCDC jurisdiction and the compliance of land use to BCDC guidelines.[2]

2. Related Projects (Figure 30)

a. City and County of San Francisco

1) India Basin Industrial Park (Butchertown Redevelopment Plan)

The industrial park plan was approved by the Department of Housing and Urban Development in 1967, and the San Francisco Board of Supervisors in 1969. The area has been cleared and soil compaction and site preparation have been under way on 126 acres of reclaimed land. By the end of 1976, 80 acres would be available for development. Advertising by the San Francisco Redevelopment Agency for the entire project started in 1976 and 2 acres have been committed for private project development.[3]

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[1] Copies of these letters are on file with the San Francisco Department of City Planning and are available for public review.

[2] Mike Wilmar, BCDC telephone conversation July 31, 1975.

[3] Richard Marshall, Redevelopment Agency, May 1976.

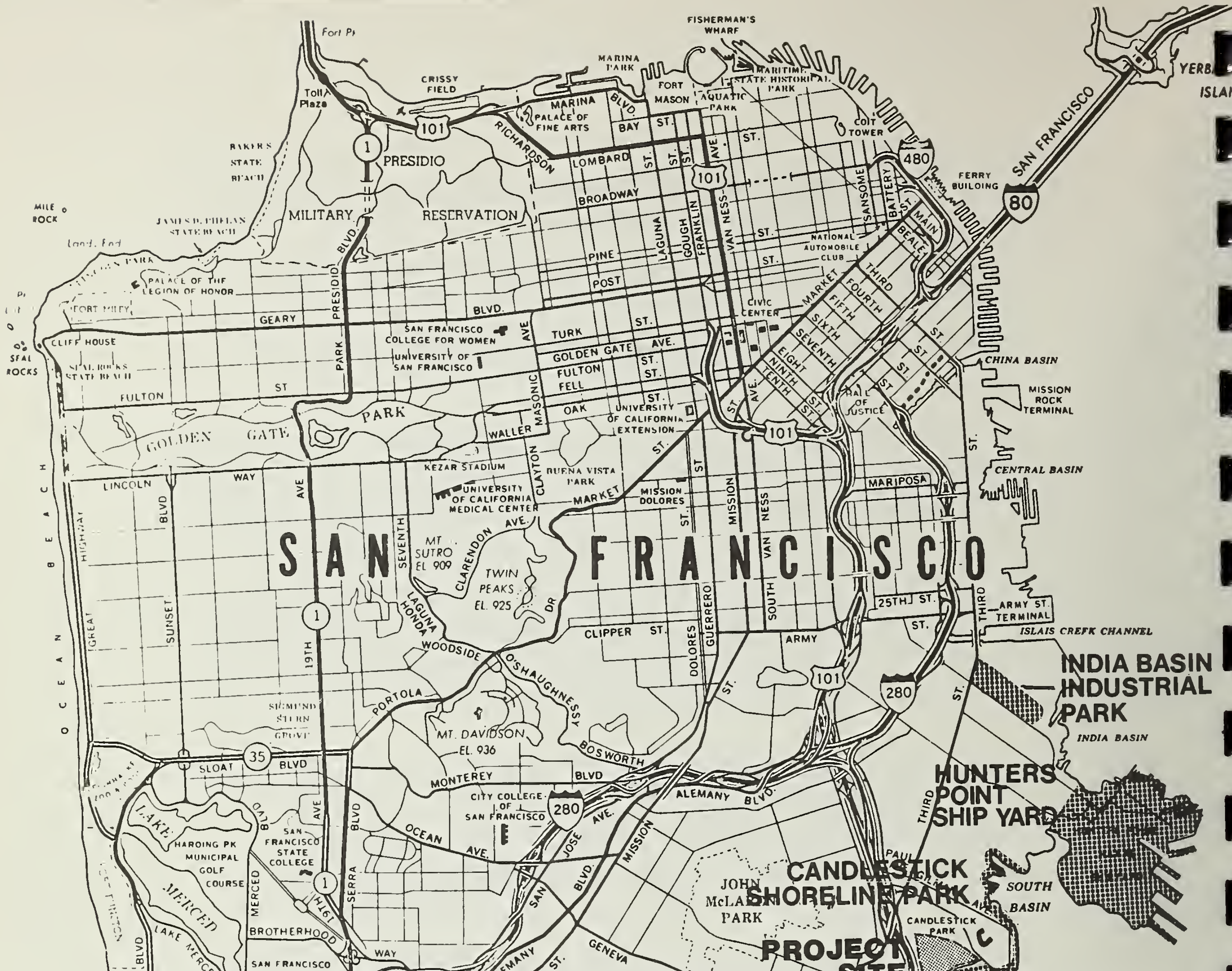

FIGURE 30. ADJACENT PLANS AND PROJECTS MAP

2) The reopening of Hunters Point Naval Shipyard

The shipyard, deactivated in 1973, has been the source of several studies prepared by the Department of City Planning and the Mayor's Office of Economic Development. The Hunters Point Shipyard Study recommended the re-establishment of ship building and repair work and the development of light industry, public recreational facilities, private housing, and new commercial activity.[1] The U.S. Navy has issued a statement, stating an intention to sign a lease for the shipyard to the AAA Machine Shop, Inc. on June 30, 1976. No details of the lease are publically available.[2]

3) Candlestick Shoreline State Park

Approximately 85 acres of park have been proposed and funds have been appropriated for land acquisition and development for a park along the shoreline from the south side of the Yosemite Canal around Candlestick Point to the intersection of Harney Way and the northbound access to the James Lick Freeway.[3] Neighborhood groups working in conjunction with representatives from the City and State agencies are in the process of developing proposals to extend the park boundaries around the Yosemite Canal and to include the south portion of Hunters Point Shipyard.[4]

4) Proposed Railroad Line to Hunters Point

The Port of San Francisco has tentatively proposed to construct a railroad to the marshaling yard at Hunters Point. The line would be used to carry dryable cargo from outside the Bay Area to the docks at Hunters Point for shipment to the Pacific area. Specifics as to the amount of use, route, construction, schedule, or funding have not been developed.[1] If the plan is pursued, an environmental impact report would be required.

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[1] Hunters Point Shipyard Study--Options for Future Use, San Francisco Department of City Planning, June 1974.

[2] John Anderson, Hunters Point Shipyard Development, City of San Francisco, May 1976, telephone conversation.

[3] San Francisco Department of City Planning, "Recreation and open space programs, recommendations for implementing the Recreation and Open Space Element of the Comprehensive Plan of San Francisco," July 1973.

[4] Douglas Holmen, op. cit.

These proposed projects and the San Francisco Executive Park would have a cumulative impact on the transportation routes in the area and the demand for public services including, but not limited to water, electricity, natural gas, and waste water treatment.

b. San Mateo County

1) San Bruno Mountain Project for the Visitacion Association, a joint venture of Crocker Bank, Foremost-McKesson, and the AMFAC (American Factors Corporation).

Originally planned as a combined residential, commercial, educational, recreational, and office development for a community of 18,600 people, this 1,273-acre project was reduced in scope by about two-thirds by the San Mateo County Board of Supervisors in March 1976. The proposed 450-acre project is now primarily planned for commercial, education, recreational and office development involving the participation for 6,000 people.[2]

2) Crocker Industrial Park

Adjacent to the City of Brisbane, approximately two miles from the proposed San Francisco Executive Park, the 300-acre development for the Crocker Bank currently employs 6,000 people and anticipates an expansion of two to three thousand more within the next five years.

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[1] John Anderson, op. cit.

[2] Geraldine Steere, Planner III, San Mateo County, telephone conversation March 29, 1976.

c. City of Brisbane

1) Sierra Point

Public hearings for the final EIR of this 110-acre development were held in April 1976. The proposed project would include 300 units of housing, a 450-berth marina, a 400-room hotel, three to four restaurants, and a park.[1]

2) Southern Pacific Property

The City of Brisbane is expecting an application in June 1976 for a 125-acre golf course development to be constructed on part of the property owned by the Southern Pacific Railroad. Additional uses for the property such as an industrial park have been mentioned, but no specific plans have been developed.[2]

The proposed projects in San Mateo County and the San Francisco Executive Park may have cumulative impacts on the demand for office space and hotel facilities, transportation services, and public utilities.

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[1] Clark Smithson, City Manager, Brisbane, telephone conversation March 29, 1976.

[2] Ibid.

V. MITIGATION MEASURES TO MINIMIZE IMPACTS

1. Geology, Soils, and Seismicity

a. The final design of the grading scheme would include a more gradual cut. All slopes would be excavated no steeper than 2:1 (horizontal:vertical), with benches about 30 feet apart vertically to improve overall stability, permit equipment access for maintenance, and facilitate landscaping.

b. The upper portion of the slide that encroaches on Bayview Park (Figure 6, page 15) would be graded back to a flatter configuration to improve the stability of the area.

c. The project developer and engineers would reach an agreement with the City for periodic maintenance inspection of the mutual boundaries, installation of an interceptor drainage system adjacent to Bayview Park, and continuous maintenance of the upper slopes of the project adjoining the park. The cost to the City is undetermined at this time.

d. A buffer zone would be constructed and maintaned between the toe of the steeper slopes and building sites to increase slope stability and protect buildings from possible damage by slides.

e. All cut slopes would be landscaped to minimize the effects of erosion and breaking of the slopes.

f. Planned grading would remove most of the small slumps; all slide debris would be removed from two larger slides and the existing slumps; and surface drainage and seepages would be redirected around the slides.

g. The drainage system would include ditches lined with gunite or other appropriate material at the toe of each slope, with interceptor drains spaced at lateral intervals of about 500 feet. Landscaping would prevent views of the ditches.

h. Detailed foundation investigations and engineering analysis would be conducted for each site to insure utilization of proper techniques to minimize the adverse effects of consolidation of foundation material such as uneven settling of buildings, and to provide resistance to seismic stress.

2. Climate

The wind study analysis of the proposed project site in Appendix B suggests several mitigation measures for the adverse effects of winds on the proposed project site and comfort of proposed project users. The following suggested mitigation measures would be implemented by the proposed project developer:

a. Regrade the exposed areas (1A and 3, Figure 3, page 7) on a slope downward from northwest to southeast to reduce exposure and increase terrain shelter. (Final plans not developed).

b. Bring structures on Area 1A closer together to decrease winds between them.

c. Rotate the towers to improve Area 3 wind conditions between them.

d. Install canopies around the bases of towers to improve wind conditions at lower levels.

e. Design the shape of the towers so that the small side of a slap-like structure would be turned to the prevailing wind to intercept less air and therefore cause lower wind speeds.

f. Resite and space the towers in Area 3 to improve wind conditions and reduce overshadowing.

g. Provide landscaped windbreaks with berms, trees, and other vegetation along pathways, plazas, and waiting areas.

h. Relocate building entrances to sunnier locations on the leeward sides of buildings and install double or revolving doors to minimize wind penetration.

i. To mitigate the effects of the marine environment corroding the exteriors of buildings, select outdoor materials for their ability to withstand airborne salt and chemicals.

j. Design buildings to control water runoff over their surfaces, particularly where corrosive contaminants caused by salt water in the air could collect.

3. Urban Design

a. The design of the high-rise towers would be modified and the actual locations resited in Area 3 to provide better proportion and less contrast with the natural land shape, and to minimize shadowing and wind effects on outdoor activities. Specific design plans have not been formulated but they would include:

--resiting the buildings farther apart and more toward the east;

--changing the vertical elevations of each tower so that the tower closer to the hill would be one to three stories higher and the tower farther from the hill would be one to three stories lower, through modification of the parking garages at different levels;

--varying the flush facades of the buildings with a series of setbacks, creating a series of landscaped terraces;

--integrating the base of the building to the hillside by means of additional architectural treatment and landscaping.

4. Air Quality. The mitigation measures for transportation (Item 6) and construction (Item 11, page 117) which are designed to reduce the use of automobiles to the project site, would decrease the air pollution impacts associated with vehicle miles traveled.

5. Vegetation and Wildlife

a. Extensive tree, shrub, groundcover and grass plantings would be added to the existing hillside earth benches and cut slopes and to future terraced hillside areas to reinforce the existing tree, shrub, and natural grass vegetation, and screen the scarred remains of past grading and cutting operations.

All future phases in and around all structures, parking lots, entrances and roads, and cut and fill slopes would be planted with trees, shrubs, vines, groundcovers and grasses and would be watered with irrigation systems.

c. Plantings of tree and shrubs would be added adjacent to existing highway plantings on the western boundary of the site.

d. The plants for steep-sloped areas would be selected for drought-resistance to minimize demand for irrigation. Design and maintenance plans would be developed to insure as much as possible the survival of plants on the project site.

e. Wherever possible native vegetation would be used in new plantings to insure increased potential for survival.

f. The developer would post bond for maintenance of landscaping for a ten-year period.

6. Transportation, Traffic, Circulation, and Parking

The developer would implement the following mitigation measures.

a. Eliminate the commercial shops except for service oriented sales associated with the proposed project's functions. This action would reduce the peak-hour trip generation rate by 7 percent.

b. As part of the proposed project plan, a minibus shuttle would be developed to facilitate transit to the downtown area, and during the noon hour to the Leland shopping area. Initially the 12 passenger minibus would run every hour in the first phase of the proposed project. When the proposed project is completed, two or more vans would be used, leaving every half-hour to Montgomery Street. The van would be used to shuttle proposed project users to and from the Southern Pacific Train Station. The proposed project sponsor would arrange to have special buses serve the hotel to and from the airport and/or the Cow Palace for special events.

c. The first pedestrian access on Blanken Avenue would be 600 feet inside the west boundary of the proposed project which would discourage proposed project-bound motorists from parking in the Little Hollywood area and walking the distance to the proposed project buildings. With the first parking entrance 600 feet east of the freeway on Blanken Avenue, motorists would find it more convenient to use the freeway interchange than to enter the proposed project on West Blanken.

d. Using staggered working hours for office employees to avert high peak traffic levels that could cause overspill onto Blanken Avenue.

e. Access would be maintaned between all parts of the proposed project and the freeway interchange when the reverse-flow operation is in effect during events at Candlestick Park. Harney Way and Jamestown Avenue are reversible on these occasions, and all proposed project-generated traffic would have to use Blanken Avenue inbound after events or outbound before events. This impact would be avoided by developing access points for all proposed project traffic from Alanna Way, i.e., allowing vehicle access to the total proposed project from Alanna Way on the freeway side of the reserve-flow operation. To improve traffic operation, the Harney Way/Alanna Way intersection would be at least 300 feet west of the proposed project access point between the hotel/ convention area and the office/restaurant area. The Alanna Way access to the proposed project should be midway between the freeway underpass and the Alanna Way/Harney Way intersection.

Mitigation measures requiring public agency action:

a. Traffic might be further decreased if the No. 29 Muni Bus line were extended to the proposed project site. The bus could carry proposed project employees directly to the Leland shopping area and the Southern Pacific's Bayshore Station. While traffic to the proposed Shoreline Park should be minor, the suggested No. 29 extension could bring urban residents to the park.

b. A new bypass road south of Blanken Avenue, such as an extension of Sunndale Avenue or Beatty Road over the Southern Pacific Railroad tracks to Old Bayshore, would divert proposed project-generated traffic from Blanken Avenue and Little Hollywood. These possible extensions are under study by Caltrans, San Mateo County, and the City of Brisbane. The extension of Tunnel Road (which meets Beatty) could connect to the proposed freeway interchange at Sierra Point.

c. The extension of Beatty Road to Old Bayshore could be used more and Blanken less if stop signs were on Blanken to discourage traffic from using the Blanken entrance to the proposed project. A more severe measure could consist of a traffic diverter on Blanken to force traffic to use the Beatty Road access to the proposed project; however, this could also be a nuisance to the residents of Little Hollywood. Signals, stop signs, and traffic diverters would require installation by the San Francisco Department of Public Works.

d. The San Mateo County Transit District could amend the County Transit plan to include the recommendation for County Transit bus connections to the proposed project.

7. Noise

a. An analysis of the noise reduction requirements would be conducted for land uses in the conditionally acceptable (b) and normally unacceptable (C) categories (Figure 14, page 41; 15, page 42 and Section III, page 9), and special insulation provisions against exterior, vehicle-generated noise would be included in the project design.

b. Noise sources (rooftop or exterior air conditioning units, fans, etc.) within the proposed project would be screened or enclosed to minimize effects on nearby areas to be used for outdoor activities.

c. Open space areas on the developed portion of the site (plazas and terraces) would be screened from traffic-related noise by dense building materials, berms, or other physical or landscape features capable of deflecting or absorbing sound.

8. Public Utilities and Energy Consumption

1) Water

The proposed project would be constructed with water-conserving fixtures and devices (toilets, shower heads, drip irrigation systems, etc.), and water-conservation techniques would be utilized in the irrigation systems for landscape maintenance.

2) Energy consumption (electricity, natural gas)

a. The project would comply wherever possible with the proposed standards of the Energy Resource Conservation and Development Commission.

b. Systems, components, and techniques would be used to reduce energy consumption and would include, but not be limited to:

--Insulation in buildings to reduce heat gain and loss and to minimize demands for heating and air conditioning.

--Use of heat-absorbing glass and draperies to reduce solar heat gain and loss through windows.

--Use of a variable air volume heating, ventilating, and air-conditioning system to minimize the quantity of air circulated in proportion to the heating or cooling load. This system would use outside air for cooling whenever exterior temperatures were cool enough for normal indoor comfort.

--Return of circulated air through lighting fixtures to cool fixtures and reduce cooling loads.

--Incorporation of an operation and maintenance program designed to conserve energy.

c. The developer is currently investigating the possible uses of solar energy for water and space heating. Pacific Gas and Electric and General Electric Corporation are in the process of preparing an application to the Energy Resource Development Administration for funds to develop a pilot solar heating unit for the proposed project.

3) Wet weather and dry weather sanitary flows

a. If the proposed project drainage were not required to be entirely treated by the City system, sedimentation basins would be used to intercept suspended sediments in stormwater runoff before they enter the Bay.

b. Grease traps would be provided as interceptors for contaminants in runoff from the parking lots throughout the project.

9. Emergency Services

a. The developer would work with the City Police and Fire Departments to insure security and access for public service vehicles.

b. The project would have a full-time security patrol and protection system, which would be coordinated with the City Police Department.

10. Neighborhood Concerns

a. The developer plans to eliminate all commercial shops in the proposed project except for service-oriented sales directly associated with proposed project functions.

b. At the suggestion of the developer, the Bayview-Hunters Point Community Coordinating Council has formed a committee and the All Peoples Coalition is considering forming such a committee to disseminate information on prospective job opportunities at the proposed project.

c. The developer would work through the San Francisco Chamber of Commerce to obtain volunteers from the business community to assist in job-training programs for minority group members to prepare them for possible employment in the proposed development. (Bill Dauer has been contacted to assist in this program.)

11. Construction

a. Dust generated by grading and construction of the project would be minimized by a program of watering graded areas and unsurfaced roads.

b. To offset potential adverse effects on archaeological resources, a qualified archaeologist would be contacted if archaeological remains were unearthed during construction or excavation. Although the probability of encountering any remains is considered remote (Appendix F), the construction company would be bound by contract to preserve and protect any discovery. There is no known potential for archaeological finds on the proposed project site as identified on the San Francisco Archaeological Sensitivity Maps. (These maps are available at the San Francisco City Planning Department.)

c. Construction equipment and operations would comply with the San Francisco Noise Ordinance.

d. On-site parking would be provided for construction workers to eliminate the need to park on adjacent neighborhood streets.

e. Storage areas for construction materials would be screened from view and sheltered from high wind exposure areas to minimize wind-blown debris around the building site and possible contamination in the community.

f. Traffic movements of delivery trucks, workers' vehicles, and other vehicles serving the construction process would be routed to and from the site via Harney and Alanna Ways and Beatty Road.

g. All construction activity would implement the maximum safety procedures in every phase of proposed project development.

VI. ANY ADVERSE ENVIORNMENTAL EFFECTS THAT CANNOT BE AVOIDED IF THE PROPOSAL IS IMPLEMENTED

A. CONSTRUCTION

Short-term adverse impacts of construction during the five year building period would involve construction-generated noise, dust, increased truck traffic on Harney and Alanna Ways and Beatty Road, and a two- to three-month disruption of traffic and the residential environment on Blanken Avenue and San Bruno Road during installation of water mains and communication connections.

B. SEISMICITY

Development on the site would be exposed to stresses imposed by earthquakes likely to be centered on the seismically active San Andreas and Hayward faults.

C. CLIMATE

The high wind velocities to which the site is exposed generate uncomfortable outside temperatures and outdoor living conditions.

D. AIR QUALITY

Increases in the carbon monxide concentration would occur at the local scale.

E. NOISE

The traffic-generated noise from the James Lick Freeway would restrict the acceptable land uses, necessitating sound insulation provisions in structures between the 80 d(BA) and 65 d(BA) contours.

F. LAND USE

The proposed project would cause an increase in population density on the proposed project site and diminish a sense of natural open space.

G. TRAFFIC, TRANSPORTATION, CIRCULATION, AND PARKING

1. The proposed project would generate an increase of 15,000 two-way vehicle trips per day. This would increase afternoon peak-hours southbound freeway traffic 15 percent (from 70 percent to 85 percent of capacity) and bring the northbound peak-hour freeway traffic to near capacity. Peak-hour traffic on Jamestown and Blanken Avenues would increase 20 to 30 percent (from a current volume estimated at less than 5 percent of capacity). The traffic volume on Harney Way would increase about 75 percent during peak hours (from a current volume estimated at less than 5 percent of capacity).

2. Parking demands for nearly 4,200 autos would be caused by the proposed project; 3,900 of these would be accommodated on site.

3. The projected transit riders on the No. 29 Muni would be approximately equal to the capacity of the existing service at the eastern terminus during peak hours and would cause an excess over available capacity throughout the remainder of the line.

H. COMMUNITY SERVICES AND PUBLIC UTILITES

The proposed project would result in increased demands for water, electricity, natural gas, and fire and police (public safety) services. The need for sewage treatment and solid waste disposal facilities would also be extended.

I. VISUAL IMPACT

The proposed project as currently designed would obstruct views of Bayview Hill from the James Lick Freeway, from neighborhoods northwest of the proposed project site, from Bayview Park (looking south), and from elevated positions west and southwest of the proposed project. The towers would contrast with the topography of Bayview Hill and would detract from the natural form of the area.

VII. ALTERNATIVES TO THE PROPOSED PROJECT

In the course of formulating the proposed project, the developer reviewed three alternative courses of action contained in a report by Economic Research Associates of Los Angeles and a study by Hart, Krivatsy and Stubee of San Francisco, City and Regional Planners.

- --A conventionally-financed, medium-income apartment development containing 700 residential units.
- --A motor hotel containing 600 rooms in two 3-story low-rise buildings and one 8- to 10-story high-rise building.
- --Development of the property as a 34-acre industrial park.

Alternatives considered include: no project, use of the site for open space and recreation, same site use and density as the proposed project, but without the high-rise towers, lower intensity of use on the site, residential use of the site, and light industrial use of the site.

The estimated square footages for structures in the six alternatives are listed in Table 14. The estimated municipal costs and tax revenues generated by each alternative are shown in Table 15, page 123. Table 16, page 124, compares the estimated employment generated by each alternative, and the estimated trip ends for each alternative are shown in Table 17, page 125. Discussion of each alternative follows:

1. No Project

No project on the site would leave the area vacant. Traffic loads on Highway 101, Harney Way, and adjacent neighborhood streets would not be increased. Alteration of the vegetative environment would not take place, nor would the change in general visual characteristics. Energy consumption of internal resources would not be increased. The estimated $190,000

TABLE 14

Comparison of Proposed Development with Alternatives: Building Square Footage

		Square Feet				
		Alternative				
Land Use	Proposed Development	1 & 2	3	4	5	6
Office, high-rise	507,000	---	---	---	---	---
Office, low-rise	357,000	---	864,000	662,000	---	65,000
Restaurant/Convention	78,000	---	78,000	88,000	---	---
Hotel	110,000	---	110,000	102,000	---	---
Shops	61,000	---	61,000	---	544,000	---
Residential	---	---	---	---	840,000	---
Industrial	---	---	---	---	---	582,000
Total	1,113,000	---	1,113,000	852,000	1,384,000	647,000

Source: Keyser Marston Associates, Appendix G.

TABLE 15

Comparison of Proposed Development with Alternatives: Municipal Costs and Revenues (1975 dollars)

	Proposed Development	Alternative				
		1 & 2	3	4	5	6
Service				Annual Cost Increase		
Police	82,000	Minimal	82,000	82,000	82,000	Minimal
Fire	Minimal	---	Minimal	Minimal	Minimal	Minimal
Sanitary sewage	99,000	Minimal	99,000	80,000	99,000	20,000
Storm drainage	- Would depend on system design and number of people involved -					
Street maintenance and cleaning, street lights, traffic signals	8,000	---	8,000	8,000+	4,000+	Minimal
* * *	* *	* *	* *	* *	* *	*
Municipal Tax[1]				Annual Revenue		
Property tax[2]	1,050,000	7,000	1,000,000	800,000	800,000	300,000
Employer's payroll tax	500,000	---	500,000	400,000	50,000	100,000
Sales tax	120,000	---	100,000	90,000	400,000	---
Hotel room tax	130,000	7,000	100,000	100,000	---	---
Total	1,800,000	7,000	1,700,000	1,390,000	1,200,000	400,000

[1] Revenues to City and County of San Francisco only.

[2] Revenues generated by land and improvements only.

Source: Keyser Marston Associates, Appendix G.

TABLE 16

Comparison of Proposed Development with Alternatives: Employment Generation

Employment	Proposed Development	Alternative 1 & 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6
Average yearly construction employment over 6 years	220	---	210	165	170	65
Permanent employment by land use						
Office						
Office workers	4,320	---	4,320	3,310	---	325
Maintenance workers	70	---	70	50	---	5
Restaurant	225	---	225	250	---	---
Hotel	190	---	190	180	---	---
Shops	140	---	140	---	1,210	---
Industrial	---	---	---	---	---	830
Total	4,940	---	4,940	3,790	1,210	1,160
Permanent employment by occupation						
White-collar						
Professional/technical	140	---	140	110	20	85
Managers/officials/ proprietors	1,080	---	1,080	830	270	120
Clerical	2,130	---	2,130	1,630	180	260
Sales	810	---	810	600	270	80
Blue-collar						
Service	550	---	550	470	210	30
Craftsmen	150	---	150	110	100	170
Operatives	35	---	35	20	130	370
Other	50	---	50	30	40	45
Total	4,940	---	4,940	3,790	1,210	1,160

Source: Keyser Marston Associates, Appendix G.

Note: The totals in some of the columns may not be the exact sum due to rounding. See Table 2, Section I in the Appendices, Volume II for exact numbers.

TABLE 17

Comparison of Proposed Development with Alternatives: Trip-End Generation

Land Use	Proposed Development	Alternative[1]			
		3	4	5	6
		Daily Two-Way Trip Ends			
Office	9,500	9,500	7,800	0	0
Hotel	1,100	1,100	1,000	0	0
Restaurant/Convention	1,300	1,300	1,800	0	0
Restaurant	700	700	0	0	0
Shop	2,500	2,500	0	2,500	0
Residential w/school	0	0	0	4,000	0
Light industry	0	0	0	0	1,900
Open space	---	---	---	---	---
Total	15,100	15,100	10,600	6,500	1,900
		Afternoon Peak-Hour Trip Ends - In			
Office	170	170	130	0	0
Hotel	30	30	300	0	0
Restaurant/Convention	640	640	880	0	0
Restaurant	70	70	0	0	0
Shop	150	150	0	150	0
Residential w/school	0	0	0	350	0
Light industry	0	0	0	0	65
Open space	---	---	---	---	---
Total	1,060	1,060	1,310	500	65
		Afternoon Peak-Hour Trip Ends - Out			
Office	1,400	1,400	1,060	0	0
Hotel	30	30	30	0	0
Restaurant/Convention	640	640	800	0	0
Resturant	40	40	0	0	0
Shop	150	150	0	150	0
Residential w/school	0	0	0	140	0
Light Industry	0	0	0	0	320
Open Space	---	---	---	---	---
Total	2,260	2,260	1,890	290	320

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[1] Alternatives 1 and 2 do not appear since their traffic generation would be negligible.

Source: D. K. Goodrich, Appendix E.

increase in municipal costs for various public services needed for the proposed development would not be imposed, and the increase of approximately $1,800,000 in tax revenues would not accrue to the City.

2. Use of the Site for Open Space and Recreation

If the property were used for recreation and open space, its appearance, viewed from the top of Bayview Hill, the freeway, or neighborhoods to the west and northwest, would not show the scars of previous earthwork. Park and open space development would tend to serve as an extension of the Shoreline Park, already proposed to the south and east.

On 42 percent of the site traffic generated noise from the freeway currently exceed the 70 dB(A) level which is the level suggested by the City of San Francisco for compatible recreation land use. Extra expense may be required to construct some type of noise insulation to shield the site from the freeway if the site were used for playground activities.

Permanent use of the property for this purpose would presumably require acquisiton by the City, State, or other public agency at $400,000[1] or more, together with further expenditure of funds to landscape and grade the site. By acquiring the site, the City of San Francisco would no longer receive taxes accruing from the private property.

Energy consumption of natural resources would increase over the no project alternative, but would be less than the other alternatives discussed.

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[1] Four times the assessed valuation of $94,000. Actual market value may be higher than $400,000.

3. Same Site Use and Density as the Proposed Project, but without the High-Rise Towers

If the proposed development were implemented with the same square footage and land uses with all structures in conformance to the 40-foot height restriction, the environmental impacts would be the same as the proposed project with the exception of visual effects and auto/pedestrian circulation.

Figure 31A is a schematic rendering of the development with no structure higher than 40 feet. The absence of the high-rise towers allows an unobstructed view of Bayview Hill from the adjacent neighborhoods, Harney Way, and the freeway. In order to accommodate the access demands of pedestrian traffic, more walkways and inclined and vertical elevators would be required than in the proposed development. To achieve the same square footage as the proposed project the following would take place:

--greater area would be developed and site preparation would be more extensive;

--additional retaining walls would have to be constructed;

--a more elaborate drainage system would have to be built;

--less open space would be available for landscaping.

The costs of construction of this alternative would be higher than the proposed project for the above reasons. A narrower variety of office space would be available without the high-rise/low-rise/garden office mix proposed in the present project design.

Energy consumption of this alternative would be greater than the proposed project due to the increased area of development (e.g., hallways, rest rooms, etc.) which would have to be heated, lighted, and air conditioned.

Because of the additional construction and site preparation costs and the absence of high-rise offices, the development could become less attractive to users and financial backers,

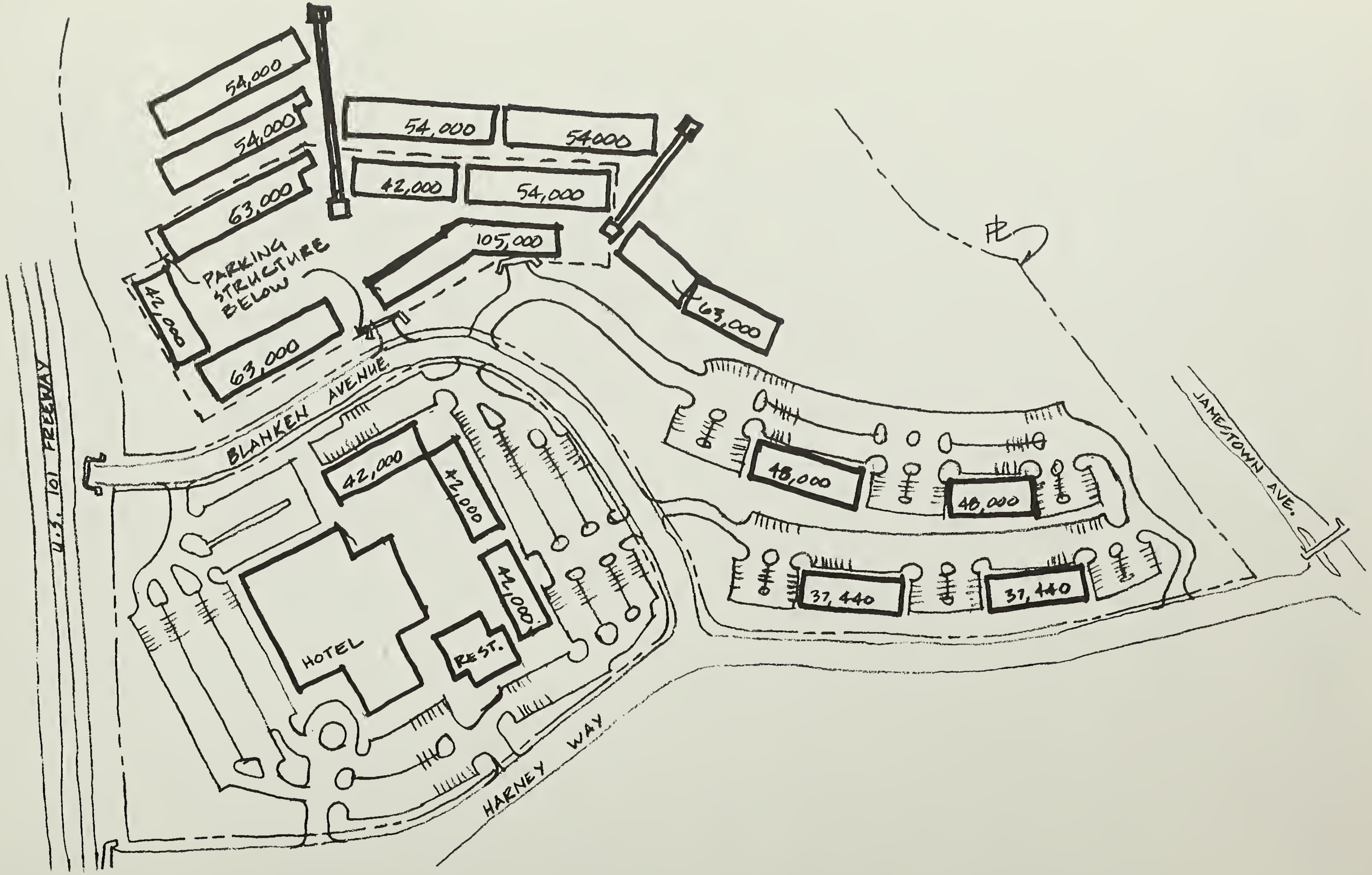


FIGURE 31A. ALTERNATIVE LAND USE: SAME SITE USE AND DENSITY -- LOW RISE

thereby increasing the risks of development to the proposed project sponsor. Such risks would render this alternative economically unfeasible.

a. Same Site Use and Density as the Proposed Project, but with a Reduction of Available Parking Spaces.

This subalternative considers the construction of approximately 2000 parking spaces, or a reduction of about 50% of the parking spaces planned in the proposed project. A decision to reduce parking availability (providing motorists would be prevented from using Little Hollywood or the Candlestick Stadium parking lot) would assume that project occupants would make greater use of transit. Presently, transit service to the proposed site is limited; but if the City and the proposed project developer could jointly increase transit services, there could be an increase in the number of proposed project users riding transit and a decrease in use of the auto. As mentioned in Appendix I, however, until improved transit service is visibly imminent, it may be unlikely to affect lenders' willingness to lend or prospective tenants' willingness to sign long-term leases. Attempting to reorient the proposed project toward primary transit dependency might begin to undercut its basic market strategy (i.e., a major attraction of the proposed project is better access and more available parking than a downtown location), and possibly render the project financially unfeasible.

4. Lower Intensity of Use on the Site

This alternative assumes the same uses as the proposed project, but with reduced square footages (Figure 31B). A lower intensity of use on the site, of about 852,000 square feet, would reduce the impacts associated with increased traffic and demands for public services and utilities, and energy consumption would be less than the proposed project.

The alternative would tend to modify the visual impact of the proposed project (compared to the proposed devleopment), pos-

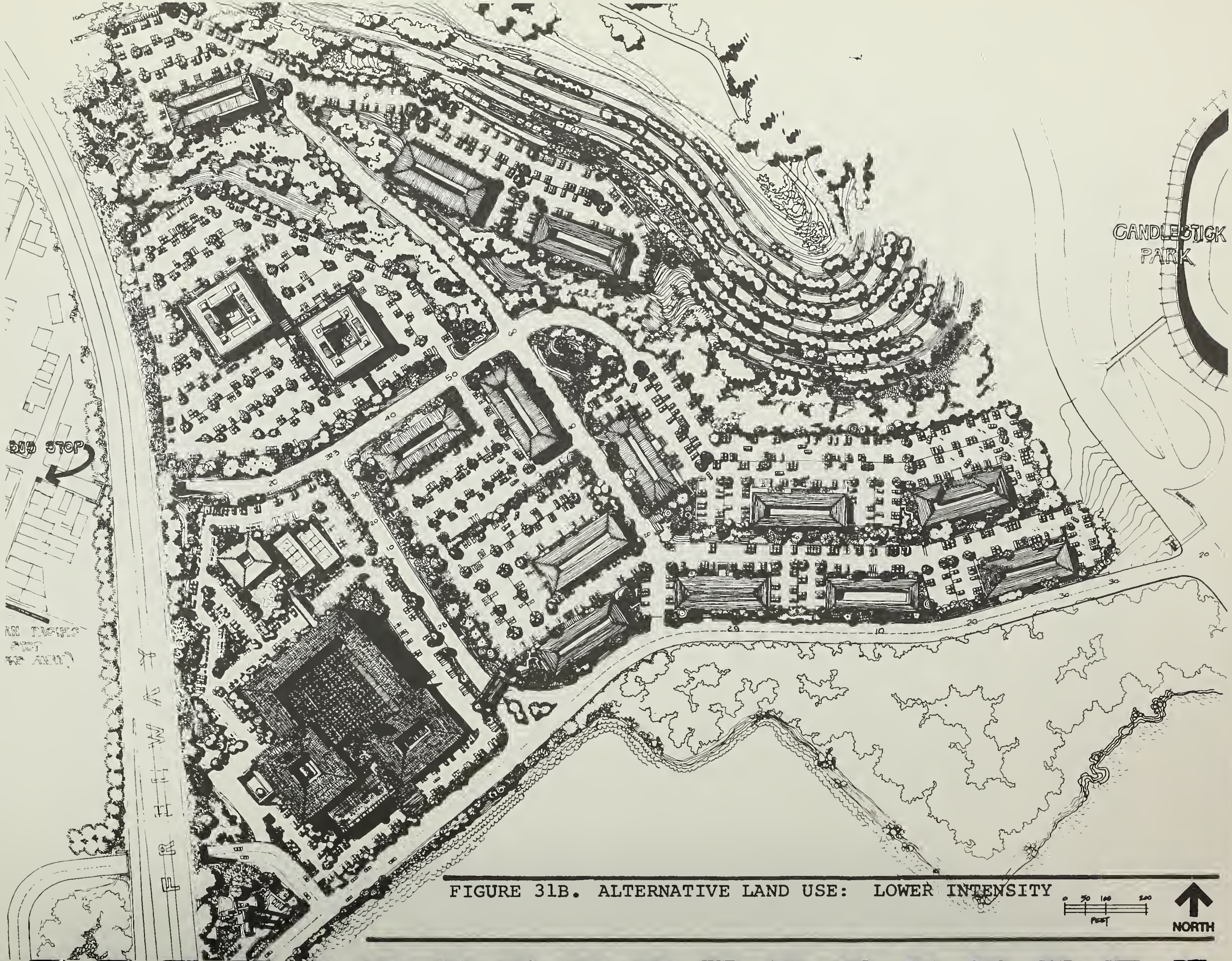


FIGURE 31B. ALTERNATIVE LAND USE: LOWER INTENSITY

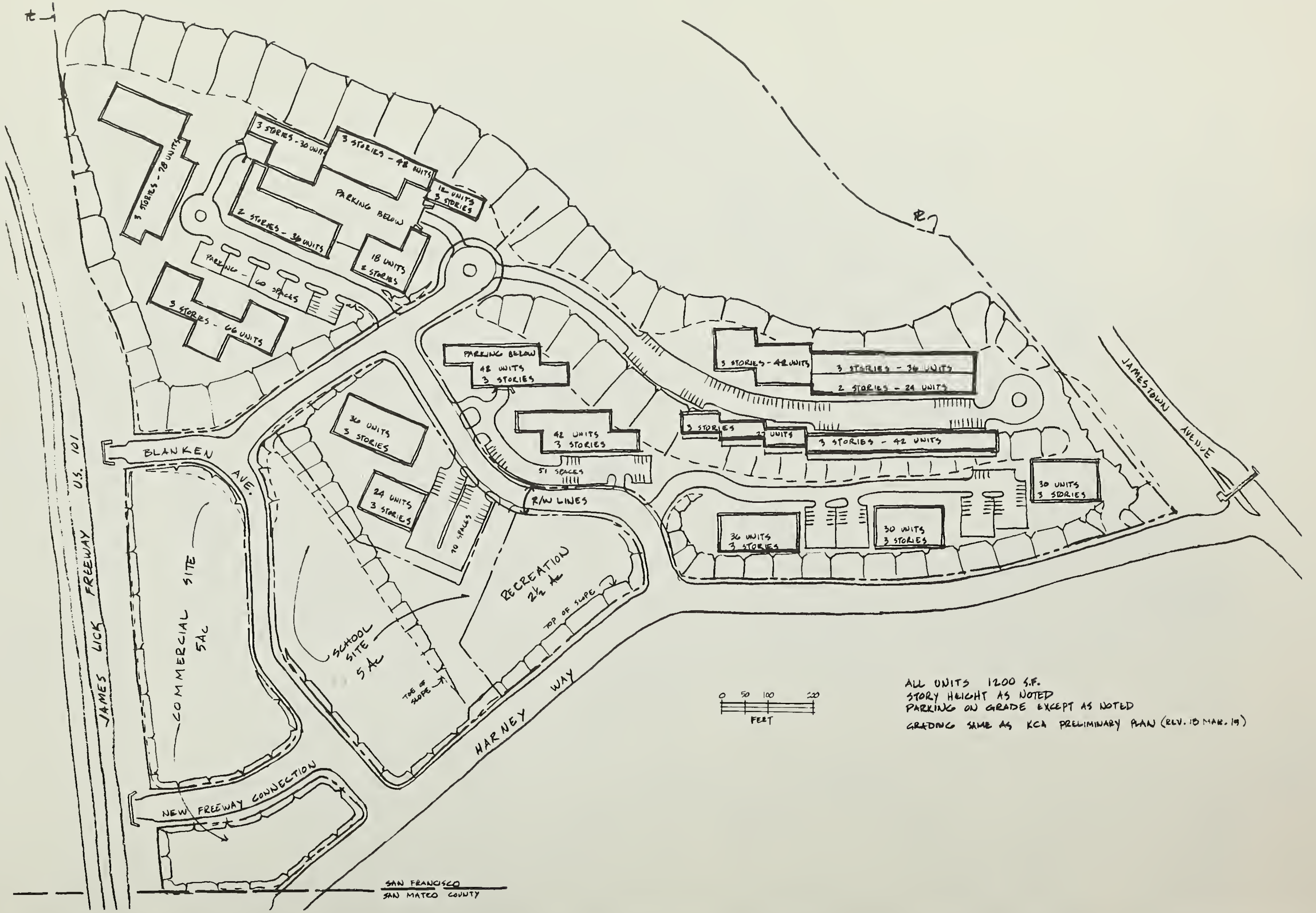
sibly by reducing the height and bulk of the buildings and the developed site coverage. Municipal costs and tax revenues would be less, as would probable jobs generated.

Such a reduction could increase the risks of development to the proposed project sponsor (see Keyser-Marston Report, Appendix I). The financial return to the developer would be less and he would not be able to provide the amenities of extensive landscaping and high-rise views important to prospective office renters. The potential renter would have less variety of office types from which to choose (i.e., no high-rise or garden landscape). These factors would affect the ability of the developer to market his space and would increase risk in achieving financial support from major lenders. Without financing the proposed project would not be feasible.

5. Residential Use of the Site

Development of 700 residential units on 47 acres is assumed, together with a 5-acre commercial parcel, a 5-acre elementary school site, and 2-1/2 acres allocated to recreation (Figure 31C). The type of residential use examined in this alternative was proposed in the South Bayshore Development Plan. It would partially conform to the existing R-1 zoning and would offer a setting of Bay views and immediate access to recreation areas and parks. According to the land use compatibility chart for community noise (Figure 15, page 42), the site for residential use and recreation activities would require noise insulation provisions, such as soundproofing in the residences and the construction of berms adjacent to the freeway, the major source of noise.

Fewer jobs would be generated by the proposed project than by the proposed development (Table 16, page 124), 56 percent fewer trips would be generated, energy consumption would be less, and



ALL UNITS 1200 S.F.
STORY HEIGHT AS NOTED
PARKING ON GRADE EXCEPT AS NOTED
GRADING SAME AS KCA PRELIMINARY PLAN (REV. 15 MAR. 19)

FIGURE 31C. ALTERNATIVE LAND USE: RESIDENTIAL

NORTH

municipal revenues accruing from property taxes would be $1,212,000 (about $573,000 less than the proposed project). Residential use of the site would be likely to generate the same amount of water consumption and place a similar demand on sewage treatment facilities.[1]

The economic analysis of alternatives in Appendix I indicates that any type of housing alternative--single-family detached, multifamily apartments, townhouses, and condominiums--for the proposed project site does not appear economically feasible for several reasons:

--The site would be a "pioneering" location for any residence or condominium above $60,000, or rental unit above $400 per month (the minimum level at which any new development could be priced without some type of public subsidy). Based on comparable housing developments (the Golden Gateway Project and prestige condominiums on Telegraph Hill), buyers and renters do not appear at this time to want to invest money and live in such a new type of location.

--The site does not appear to be attractive to the types of residences described above because of wind and discomfort as well as the proximity to the freeway and Candlestick Park.

Residents of the adjacent communities have also discouraged the development of housing on the proposed project site. Past experience in the area has shown that medium to upper economic level housing projects have been unprofitable and have eventually had to be controlled and maintained by the public sector (e.g., the Geneva Towers).

6. Light Industrial Use of the Site

This alternative would involve construction of 647,000 square feet of industrail buildings to be used for warehousing and light manufacturing, with some office support space. Such

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[1] If each household had 4.5 occupants, water consumption would be approximately 252,000 gallons per day (80 gallons per capita x 4.5 x 700 units) plus the commercial parcel, school, and landscape irrigation. The estimated consumption for the proposed project is 283,000 gallons per day.

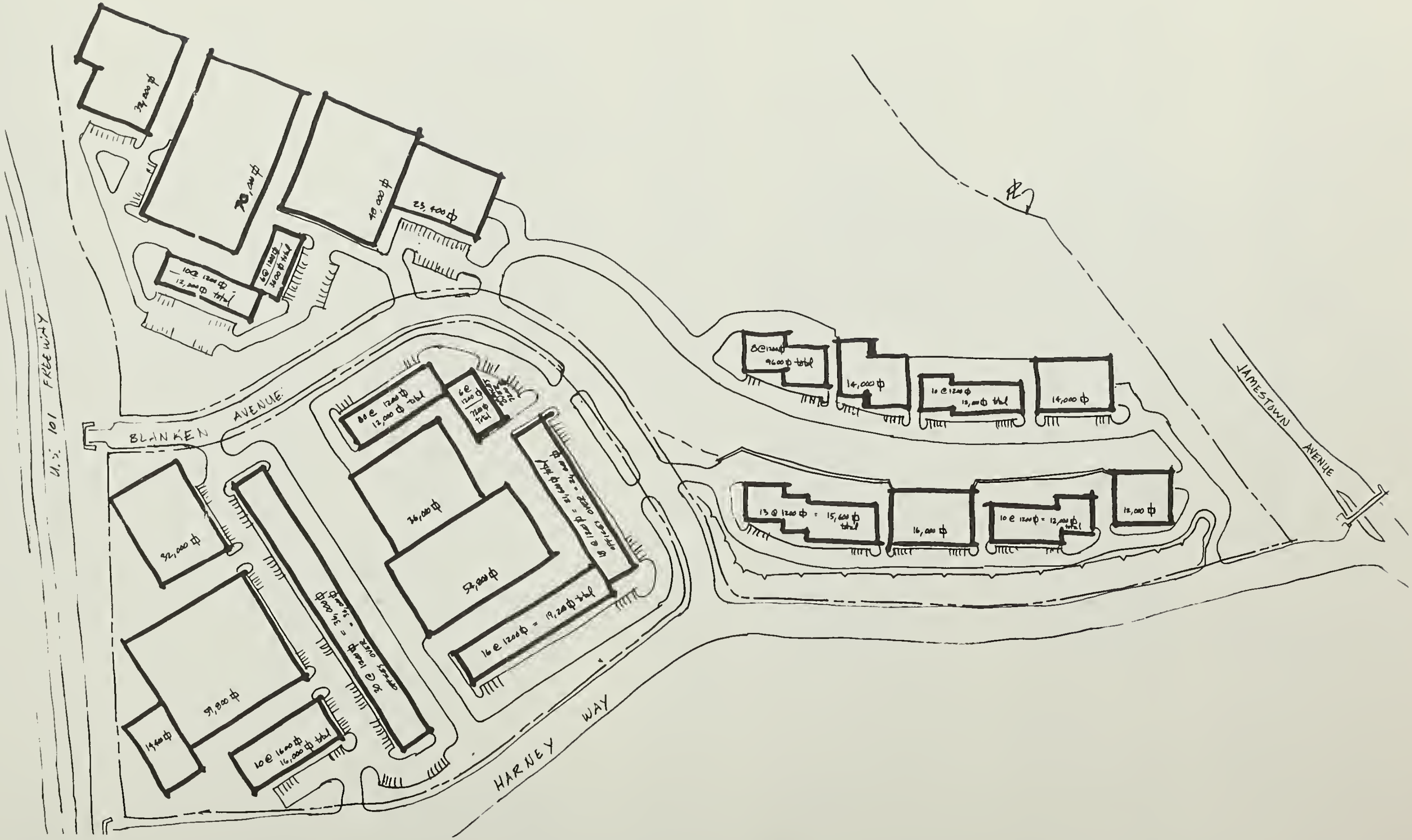

FIGURE 31D. ALTERNATIVE LAND USE: LIGHT INDUSTRIAL

light industrial use would conform partly to the existing M-1 zoning (Figure 31D) and would generate some 1,200 jobs (compared to the estimated 4,900 jobs provided by the proposed project). Industrial use would be more appropriate than other uses, considering the wind and noise factors on the site (the City's land use compatability chart for community noise indicates that light industrial use would be acceptable up to 75 dB(A), Category A).

Utility requirements, energy consumption, and demands for public services would be lower with industrial use than Alternatives 3, 4, and 6 and the proposed development. Annual municipal revenues accuring from property taxes would be approximately $437,000 (about $1,347,000 less than those from the proposed project).

Projected two-way trips generated by this alternative would be less than 2,000, although truck traffic and noise would increase on Beatty Road, Harney Way, and the freeway access ramps. Fire hazard could be increased due to the possibility of storage of flammable products on the property, and manufacturing activity might promote an increase in air pollution.

The economic analysis in Appendix I indicates that industrial use for the area has limited demand and that South San Francisco offers lower taxes and better rail and airport access. The proposed project developer rejected the light industrial use alternative because of its limited potential for economic return and unfavorable market conditions for such use at the project site.

VIII. THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN' ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The development of the site as proposed would preclude future options for site use. Alternative uses of the site discussed in Section VII that would partially conform to the current R-1 and M-1 zoning would also entail long-term uses of the site.

If the proposed project were implemented, the use of the site as open space and views of the south slope of Bayview Hill would be restricted.

Development of the project would have the cumulative and long-term effects of depleting the natural resources of fossil fuels and construction materials and contributing to the traffic volumes on the James Lick Freeway. Adjacent plans and projects in the area (as described in Section III. C) would also have similar cumulative effects on the consumption of natural resources and traffic generation; however, all projects would provide additional employment and tax revenue to the respective jurisdictions, i.e. the Cities of San Francisco, Brisbane, South San Francisco and Daly City, and San Mateo County.

The developer feels that the project as proposed should be undertaken soon because: (1) the site currently generates no income for the property owners; and (2) costs of development are continually rising and risks of financial backing are increasing.[1]

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[1] Lee Saylor, Inc., Consulting Cost Engineers, 1541 Palos Verdes Mall, Walnut Creek, California, May 1976, telephone conversation.

IX. IRREVERSIBLE ENVIRONMENTAL CHANGES THAT WOULD BE INVOLVED IN THE PROPOSED ACTION SHOULD IT BE IMPLEMENTED

The irreversible and irretrievable environmental changes that would result if the proposed project were fully implemented involve the consumption of material, energy, and land resources.

Consumption of material resources entails those used in construction, in equipping of the structures, and in long-term maintenance and operation of the facilities.

Energy resources would be consumed during the construction of the proposed project and transportation of building materials to the site in the form of gasoline, diesel fuel, and electricity, and during operation and maintenance of the proposed project in the form of electricity and natural gas. Indirect consumption would occur in terms of energy used by increase transportation demands of the proposed project users.

Land resources would be consumed in terms of site preparation, grading and excavation, adding soil (fill material), and rearranging soil (landscaping and shaping).

X. GROWTH-INDUCING IMPACTS OF THE PROPOSED ACTION

When fully implemented, the proposed project would create about 4,900 jobs, 3,400 of which would be clerical and service positions and 1,400 professional/managerial. Most of the clerical/service workers are expected to come from San Francisco and northern San Mateo Counties. Professional workers could also live in the East Bay and Santa Clara and Marin Counties.

As the project is designed to attract new businesses and/or firms planning to leave San Francisco, presumably there would be some project employees attracted from outside the Bay Area contributing to the local population growth and placing a demand for new housing and support services. The project is not expected to change the distribution of San Francisco's resident or commuter populations.[1]

In addition to affecting the intensity of development on the now-vacant site, the proposed project is one of several office/hotel/restaurant complexes proposed in the south San Francisco and north San Mateo areas, and may indirectly contribute to a trend in such land use development. These trends in development of currently vacant land could cumulatively affect the environment in terms of land use, job opportunities, tax revenues, and demands on transportation, circulation, and public service facilities, including the currently over-used San Francisco Southeast Water Pollution Control Plant.[2]

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[1] In 1975 the SPUR Report Impact of the Intensity of High-Rise Development in San Francisco, June 1975, indicates that the distribution of downtown office space populations was 60 percent commuter and 40 percent resident. For downtown business, in general the distribution was more evenly split. The proposed project will attract similar users and employees, and is not expected to change the resident and commuter population distributions for the City.

[2] As mentioned in Section III, 10, page 45, the proposed expansion of the southeast Water Pollution Control Plant would be able to process

If the height reclassification is allowed by the City for the construction of the proposed high-rise office towers, a precedent could be set to induce further height reclassifications, thereby undermining the purpose of height limits in San Francisco.

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the dry and wet weather sanitary flows of the proposed project, however, the cumulative impact of the projected demands on the expanded plant's level of service and the sanitary flows generated by the proposed project would probably exceed the plant capacity. In such events the overflow would have to be pumped, at expanded cost, to the treatment facilities on the west side of the City.

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